SONY®

COLOR VIDEO CAMERA

BVP-570
BVP-570WSPK

Power HAD 1000

MAINTENANCE MANUAL
1st Edition (Revised 2)
Serial No. 15001 and Higher: BVP-570
Serial No. 55001 and Higher: BVP-570WSPK

⚠警告

このマニュアルは，サービス専用です。

お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。

危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.

Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ.
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

For the customers in the U.S.A. and Canada

RECYCLING NICKEL-CADMIUM BATTERIES

Nickel Cadmium batteries are recyclable. You can help preserve our environment by returning your unwanted batteries to your nearest point for collection, recycling or proper disposal. Note: In some areas the disposal of nickel cadmium batteries in household or business trash may be prohibited.

RBRC (Rechargeable Battery Recycling Corporation) advises you about spent battery collection by the following phone number.

Call toll free number: 1-800-822-8837
(United States and Canada only)

Caution: Do not handle damaged or leaking nickel-cadmium batteries.

Voor de klanten in Nederland

Dit apparaat bevat een MnO_2-Li batterij voor memory back-up.

Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.

Gooi de batterij niet weg. maar lever hem in als KCA.

Bij dit produkt zijn batterijen geleverd.
Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

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Manual Structure

Purpose of this manual

This manual is the maintenance manual for Color Video Camera BVP-570/570WSPK.

This manual describes the information items necessary when the unit is supplied and installed, items on maintenance, and items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts list, assuming use of system and service engineers.

Contents

The followings are summaries of all the sections for understanding the contents of this manual.

Section 1 Installation

Describes information about connector input/output signals, instance of configuration and function of internal switches.

Section 2 Service Overview

Describes information about board locations, circuit description, replacement of part and notes on service.

Section 3 Setup menu

Describes information about setup menu and self-diagnosis mode.

Section 4 Alignment for OHB Installation

Describes adjustment necessary for installation of OHB.

Section 5 Overall Electrical Alignment

Describes electrical adjustment necessary for maintenance of the unit or replacement of parts.

Section 6 Spare Parts

Describes parts list, exploded views, supplied accessories and fixtures list used in the unit.

Section 7 Semiconductor Pin Assignments

Describes function diagrams and pin names of semiconductor used in the unit.

Section 8 Block Diagrams

Describes overall block diagram and the block diagrams for every circuit board.

Section 9 Schematic Diagrams

Describes schematic diagrams for every circuit board.

Section 10 Board Layouts

Describes board layouts for every circuit board.

Relative manuals

Besides this maintenance manual the following manuals are available for this unit.

- **Operation Manual (Supplied with this unit)**
  This manual is necessary for application and operation of this unit.

- **System manual (Available on request)**
  This manual is necessary for connection and operation of this unit and other peripheral equipments.
  If this manual is required, contact your local Sony Sales Office/Service Center.

- **OHB-450/550 series Installation Guide**
  (Supplied with OHB-450/550 series)
  This manual describes the information items necessary when the OHB-450/550 series CCD unit is supplied and installed.

- **OHB-T450WS series Installation Manual**
  (Supplied with OHB-T450WS/T450WSP)
  This manual describes the information items necessary when the OHB-T450WS/T450WSP is supplied and installed.

- **OHB Maintenance Manual**
  (Supplied with OHB-450/550/T450WS series)
  This manual describes items on maintenance, items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts list.

- **Maintenance Manual for CCD unit**
  (Supplied with BVP-550WSPK/570WSPK)
  This manual describes items on maintenance, items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts list for the CCD unit of BVP-550WSPK/570WSPK.

Section 1
Installation

1-1. Notes on Installation

1-1-1. Note on OHB Installation

When installing the OHB with the serial number as shown below in BVP-570 which was upgraded by BKP-5090, be sure to perform adjustment item described in the supplement separately available (Sony P/N: 9-968-544-01) in order to obtain optimum CCD's dynamic range.
For details, please consult your local Sony Sales Office/ Service Center.

Model	Serial No.
OHB-550 (UC)	10001 - 10490
OHB-550P (CE)	40001 - 40635
OHB-550WS (UC)	10001 - 10135
OHB-550WS (UC)	11001 - 11080
OHB-550WSP (CE)	40001 - 40380
OHB-550WSP (CE)	41001 - 41221
OHB-450 (UC)	10001 - 10645
OHB-450P (CE)	40001 - 40762
OHB-451 (UC)	10001 - 10165
OHB-451P (CE)	40001 - 40227
OHB-455WS (UC)	10001 - 10115
OHB-455WSP (CE)	40001 - 40265
OHB-T450WS (UC)	10001 - 10090
OHB-T450WSP (CE)	40001 - 40040

1-1-2. Checking ROM Version

When this unit is used under the camera system using MSU-700 and CNU-700, be sure to check that the ROM version for IC10 on the CPU-171 board of the MSU-700 is Ver.3.00 or higher and that the versions for IC4 and IC5 on the AT-89 board of the CNU-700 are Ver.2.70 or higher.
If ROM replacement is required, please consult your local Sony Sales Office/Service Center.

ROM Version

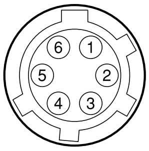
[MSU-700]
IC10/CPU-171 board   Ver.3.00 or higher

[CNU-700]
IC4, IC5/ AT-89 board   Ver.2.70 or higher

1-2. Connector Input/Output Signals

TEST OUT
BNC 75 Ω 1.0 V p-p

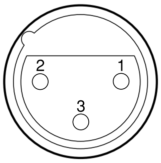
REMOTE (6P FEMALE)



(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	SERIAL DATA IN	Serial data for camera control
2	SERIAL DATA OUT	
3	UNREG (G)	
4	VBS (X) OUT	VBS 1 V p-p, Zo = 75 Ω
5	VBS (G) OUT	
6	UNREG OUT	+10.5 V to +17 V

MIC IN (3P FEMALE)

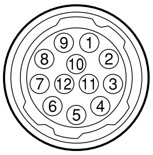


(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	MIC IN (G)	−60 dBu High impedance balanced
2	MIC IN (X)	
3	MIC IN (Y)	

(0 dBu=0.775 Vrms)

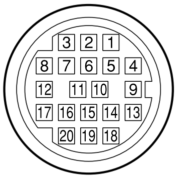
LENS (12P FEMALE)



(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	RET VIDEO ENABLE IN	ENABLE: 0 V DISABLE: +5 V or OPEN
2	RET 2 ENABLE IN	ENABLE: 0 V DISABLE: +5 V or OPEN
3	GND	GND for UNREG
4	AUTO +5 V OUT	AUTO: +5 V MANU: 0 V or OPEN
5	IRIS CONT OUT	+3.4 V (F16) to +6.2 V (F2.8)
6	UNREG OUT	+10.5 V to +17 V
7	IRIS POSITION IN	+3.4 V (F16) to +6.2 V (F2.8)
8	AUTO/MANU OUT	AUTO IRIS: 0 V MANUAL IRIS: +5 V
9	EXTENDER ON/OFF IN	EX 2 ON: 0 V EX 0.8 ON: +1.8 V OFF: +4.8 V
10	ZOOM POSITION IN	WIDE: 2 V TELE: 7 V
11	NC	No connection
12	NC	No connection

VF (20P FEMALE)



(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	NC	No connection
2	ABNORMAL IND OUT	L: Indicator lights OPEN: Indicator goes out
3	16:9 MODE OUT	H: NORMAL (4:3) L: WIDE (16:9)
4	NC	No connection
5	COMP/VBS SW IN/OUT	*Note1
6	CCIR/EIA OUT	H: CCIR, L: EIA
7	NC	No connection
8	G TALLY OUT	H: Indicator lights L: Indicator goes out
9	NC	No connection
10	Y (X) OUT	1 V p-p, VF:Zi = 1 kΩ
11	ZEBRA $\overline{\text{ON}}$ IN	H: OFF, L: ON
12	VF VIDEO OUT (X)	1.0 V p-p, VF:Zi = 1 kΩ
13	NC	No connection
14	B-Y (X) OUT	700 mV p-p, VF:Zi = 1 kΩ, 75 % color-bars
15	R-Y (X) OUT	700 mV p-p, VF:Zi = 1 kΩ, 75 % color-bars
16	BATT IND OUT	H: Indicator lights L: Indicator goes out
17	TALLY IND OUT	H: Indicator lights L: Indicator goes out
18	+9.3 V (VF) OUT	REG +9.3 V
19	GND	GND
20	UNREG OUT	+10.5 V to 17 V

Note1: Specification of COMP/VBS SW Signal

When powering on, the microcomputer of the camera identifies a viewfinder in use by detecting the voltage at pin 5.

H: Color VF, L: B/W VF

- In use of B/W VF
  Voltage control of pin 5 is disabled during operation. Switching between the return video signal and monochrome signal for the viewfinder is done by the camera and selected signal is output at pin 12 to the viewfinder.
- In use of Color VF
  By controlling the voltage at pin 5 during operation, switching between the decoded return video signal and the camera component signal is done in the viewfinder.
  H: Camera, L: Return video

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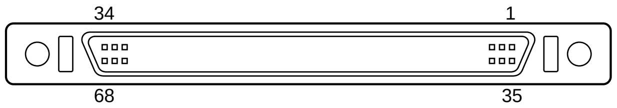
ANALOG CA (68P FEMALE)



(EXTERNAL VIEW)

*: In connection with CCU, **: In connection with VTR

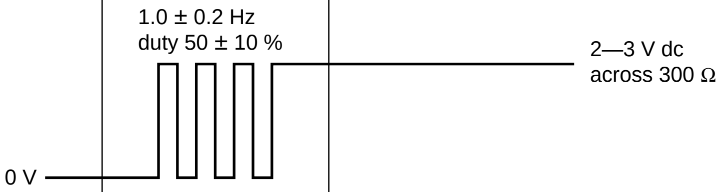
No.	SIGNAL	SPECIFICATIONS
1	UNREG GND	GND for UNREG
2	UNREG GND	GND for UNREG
3	VF UNREG GND	GND for VF UNREG
4	LENS UNREG GND	GND for LENS UNREG
5	UNREG IN	10.5 V to 17 V
6	UNREG IN	10.5 V to 17 V
7	VF UNREG IN	10.5 V to 17 V
8	LENS UNREG IN	10.5 V to 17 V
9	R OUT (X)	700 mV p-p ±2 %, DC 0 ±200 mV, Zo = 75 Ω
10	B OUT (X)	700 mV p-p ±2 %, DC 0 ±200 mV, Zo = 75 Ω
11	VBS OUT (G)	GND for VBS VIDEO
12	Y OUT (X)	VS 1.0 V p-p, Zo = 75 Ω
13	B-Y OUT (X)	700 mVp-p, with sample 350 mV* 756 mV p-p (J) 700 mV p-p (UC) } ** 75 % color bars 525 mV p-p (CE)
14	NC	No connection
15	C OUT (X)	SC for S connector
16	VBS GENLOCK IN (X)	1.0 V p-p ±6 dB
17	RET VIDEO IN (G)	GND for RET VIDEO
18	MONITOR VIDEO OUT (X)	VS 1.0 V p-p, Zo = 75 Ω
19	BATTERY ALARM IN	Zi = 300 Ω *Note 2
20	NC	No connection
21	AUDIO CH1 CONT OUT	0 V (0 dB) to 7 V (−50 dB or less)
22	MIC 1 OUT (Y)	Zo ≤ 600 Ω, −60 dBu balanced
23	NC	No connection
24	SKIN TONE GATE OUT	1.0 Vp-p
25	TAPE REM IN	*Note 4
26	VTR SYNC OUT	+5.0 Vp-p Negative pulse, Zo ≤ 100 Ω
27	RET EN OUT	ENABLE; 0 V, DISABLE; +5 V or OPEN
28	PB REF IN	PB; +4.5 V, CAM; 0 V or OPEN
29	H CONT IN	0 V to 5 V, Analog
30	ANALOG GND	
31	DIGITAL HD OUT	3.3 Vp-p for Digital
32	COM CONT IN	5 V p-p
33	IIC CLOCK OUT (CA)	5 V p-p
34	IIC CLOCK OUT (ST)	5 V p-p

No.	SIGNAL	SPECIFICATIONS
35	UNREG GND	GND for UNREG
36	UNREG GND	GND for UNREG
37	VF UNREG GND	GND for VF UNREG
38	LENS UNREG GND	GND for LENS UNREG
39	UNREG IN	10.5 V to 17 V
40	UNREG IN	10.5 V to 17 V
41	VF UNREG IN	10.5 V to 17 V
42	LENS UNREG IN	10.5 V to 17 V
43	G OUT (X)	700 mV p-p ±2 %, DC 0 ±200 mV, Zo = 75 Ω
44	R/G/B GND	GND for R/G/B VIDEO
45	VBS OUT (X)	1.0 V p-p ±10 %, Zo = 75 Ω
46	R-Y OUT (X)	700 mV p-p, with sync 350 mV* 756 mV p-p (J) 700 mV p-p (UC) } ** 75 % color bars 525 mV p-p (CE)
47	Y/R-Y/B-Y GND	GND for Y/R-Y/B-Y
48	NC	No connection
49	C OUT (G)	GND for C
50	VBS GENLOCK IN (G)	GND for GENLOCK/H CONT IN
51	RET VIDEO IN (X)	1.0 Vp-p, Zi = 1 kΩ
52	MONITOR VIDEO OUT (G)	GND for MONITOR VIDEO
53	VTR START/STOP OUT	Zo ≤ 10 kΩ
54	NC	No connection
55	MIC 1 OUT (G)	GND for CAM MIC
56	MIC 1 OUT (X)	Zo ≤ 600 Ω, −60 dBu balanced
57	NC	No connection
58	NC	No connection
59	AUDIO LEVEL IN	Zi ≥ 1 kΩ (−15 dBu at 0 VU)
60	NC	No connection
61	V RESET IN/CF OUT	V Reset;0 V to +5 V, CF; 0 V to −5 V
62	REC TALLY IN	ON; +5 V, OFF; +2.5 V or 0 V, Zi ≥ 20 kΩ *Note 3
63	VTR SAVE OUT	SAVE; +4.5 V, STANDBY; 0 V, Zo ≤ 10 kΩ
64	GND	
65	SD IN/OUT	Serial data for camera control
66	COM DATA OUT	5 V p-p
67	IIC DATA IN/OUT (CA)	5 V p-p, 4700 Ω, Pull up
68	IIC DATA IN/OUT (ST)	5 V p-p, 4700 Ω, Pull up

(0 dBu=0.775 Vrms)

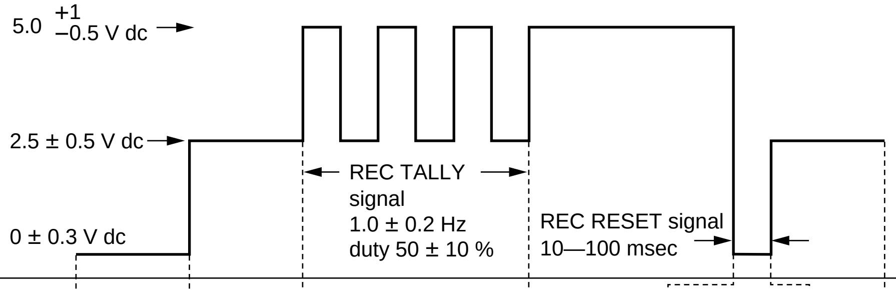
Note 2 : Specifications of BATT ALARM Signal

VTR has a battery voltage detection and waring signal generation circuits and it sends the signal shown below to the camera.


1.0 ± 0.2 Hz
duty 50 ± 10 %
2—3 V dc
across 300 Ω
0 V

Battery Terminal Voltage (VTR internal battery)	12.0—11.1 V dc	11.1—10.8 V dc	10.8 V dc—
Input Signal at Pin 19	0 V	1.0 ± 0.2 Hz duty 50 ± 10 %	2—3 V dc across 300 Ω
LED on Viewfinder	Stays out	Blinks at 1 Hz	Lights up

Note 3 : Specifications of REC TALLY Signal

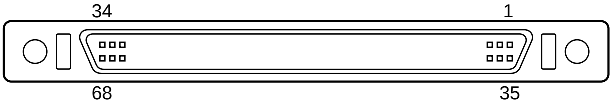

$5.0^{+1}_{-0.5}$ V dc
2.5 ± 0.5 V dc
0 ± 0.3 V dc
REC TALLY
signal
1.0 ± 0.2 Hz
duty 50 ± 10 %
REC RESET signal
10—100 msec

Input Signal at Pin 62	0 ± 0.3 V dc	2.5 ± 0.5 V dc	REC TALLY signal 1.0 ± 0.2 Hz duty 50 ± 10 %	$5.0^{+1}_{-0.5}$ V dc	REC RESET signal 10—100 msec	2.5 ± 0.5 V dc
VTR Action	Power OFF	Power ON	When VTR changes from POWER SAVE to REC START mode, or when the servo is lost	When VTR changes from STANDBY to REC START mode, or in REC mode	At the end of tape or When VTR is put into STOP mode by itself (REC RESET signal does not appear when VTR is put into STOP mode by operating the camera)	STOP mode

Note 4 : Specifications of TAPE REM Signal

Tape Remaining (VTR)		**Input Signal at Pin 25**	**Remark**
TAPE1	**TAPE2**		
+5 V	+5 V	+3.4 V	
+5 V	0 V	+3.1 V	G TALLY lamp lights at +3.1 V
0 V	+5 V	+2.2 V	
0 V	0 V	0 V	

DIGITAL CA (68P FEMALE)



(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	Y (L) OUT	3.3 V p-p
2	Y (2) OUT	
3	Y (4) OUT	
4	Y (6) OUT	
5	Y (8) OUT	
6	R-Y (L) OUT	3.3 V p-p
7	R-Y (2) OUT	
8	R-Y (4) OUT	
9	R-Y (6) OUT	
10	R-Y (8) OUT	
11	B-Y (L) OUT	3.3 V p-p
12	B-Y (2) OUT	
13	B-Y (4) OUT	
14	B-Y (6) OUT	
15	B-Y (8) OUT	
16	DIGITAL GND	GND for DIGITAL
17	DIGITAL BLANKING OUT	3.3 V p-p
18	DIGITAL SYNC OUT	3.3 V p-p
19	NC	No connection
20	NC	No connection
21	NC	No connection
22	NC	No connection
23	NC	No connection
24	NC	No connection
25	NC	No connection
26	NC	No connection
27	NC	No connection
28	NC	No connection
29	NC	No connection
30	NC	No connection
31	NC	No connection
32	NC	No connection
33	NC	No connection
34	18 MHz OUT (G)	GND for 18 MHz

No.	SIGNAL	SPECIFICATIONS
35	Y (1) OUT	3.3 V p-p
36	Y (3) OUT	
37	Y (5) OUT	
38	Y (7) OUT	
39	Y (M) OUT	
40	R-Y (1) OUT	3.3 V p-p
41	R-Y (3) OUT	
42	R-Y (5) OUT	
43	R-Y (7) OUT	
44	R-Y (M) OUT	
45	B-Y (1) OUT	3.3 V p-p
46	B-Y (3) OUT	
47	B-Y (5) OUT	
48	B-Y (7) OUT	
49	B-Y (M) OUT	
50	DIGITAL GND	GND for DIGITAL
51	DIGITAL SAMPLE OUT	3.3 V p-p
52	DIGITAL VD OUT	3.3 V p-p
53	DIGITAL CF OUT	3.3 V p-p
54	NC	No connection
55	NC	No connection
56	NC	No connection
57	NC	No connection
58	NC	No connection
59	NC	No connection
60	NC	No connection
61	NC	No connection
62	NC	No connection
63	NC	No connection
64	NC	No connection
65	NC	No connection
66	NC	No connection
67	NC	No connection
68	18 MHz OUT (X)	3.3 V p-p

1-3. Connection Connector

Connection made with the connector panels during installation or service, should be made with the connector specified in the following list, or equivalent parts.

Connector Name	Connection Connectors
TEST OUT (BNC)	1-569-370-12 Plug, BNC
REMOTE (6P FEMALE)	1-560-078-00 Plug, 6P Male or HIROSE HR10-7PA-6P equivalent
MIC IN (3P FEMALE)	1-508-084-00 XLR, 3P Male or ITT Cannon XLR-3-12C equivalent

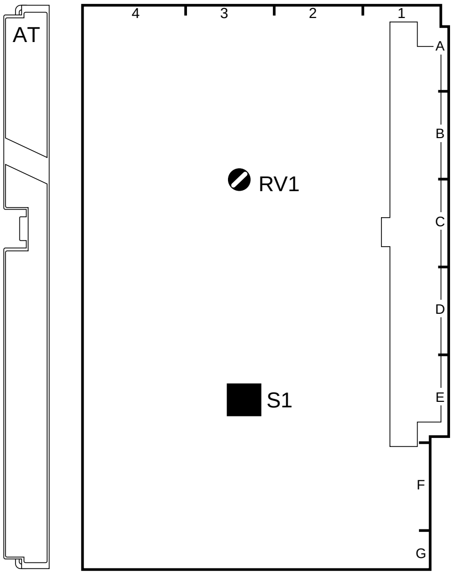
1-4. Installation Conditions

Operating Temparature:	−20 °C to +45 °C
Storage Temparature:	−20 °C to +50 °C
Humidity:	No condence

- Install the unit in a location as dry and well-ventilated as possible.
- Do not install the unit in the following conditions.
  High temparature room or near the heat source
  Excessive dust or mechanical vibration
  Intense magnetic and electric fields
  A place subjected to direct sunlight or strong light

1-5. Function of Internal Switches/ Control

AT-126 Board



S1: Setup menu select switch (S1-1 to S1-4)
Setup menu indicated on the viewfinder can be selected in combination of switches S1-1 to S1-4.

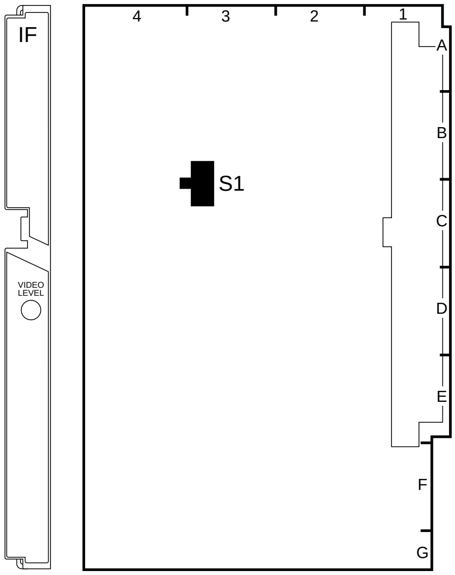
( ) in parentheses: Factory-set positions

				Setup Menu					
S1-1	S1-2	S1-3	S1-4	Operation	Paint	Maintenance	Reference	Trimming	Config
OFF	OFF	OFF	OFF	YES	NO	NO	NO	NO	NO
(ON)	(OFF)	(OFF)	(OFF)	YES	YES	NO	NO	NO	NO
OFF	ON	OFF	OFF	YES	YES	YES	NO	NO	NO
ON	ON	OFF	OFF	YES	YES	YES	YES	NO	NO
OFF	OFF	ON	OFF	YES	YES	YES	YES	YES	NO
ON	OFF	ON	OFF	YES	YES	YES	YES	YES	YES

For details on the setup menu, refer to Section 3.

RV1: Audio level indication adjustment control
Adjusts the VTR playback audio level indicated on the viewfinder screen.

IF-510 Board



S1: VF connector signal select switch

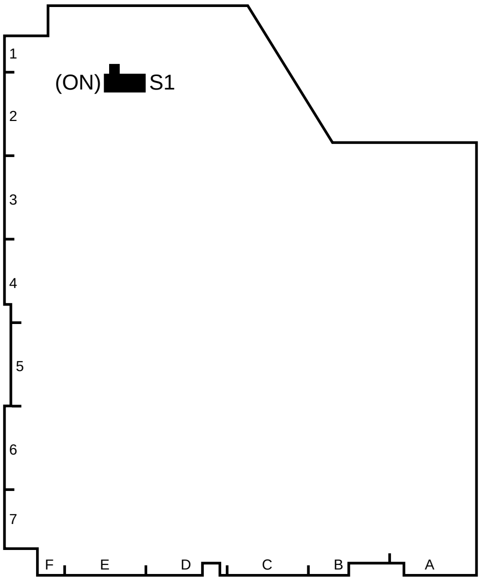
Selects an output signal at VF connector.

RET: Return video signal from CCU

GEN: Reference signal for external synchronization which is input at GENLOCK IN connector of CA

Factory-set position: RET

MB-602 Board



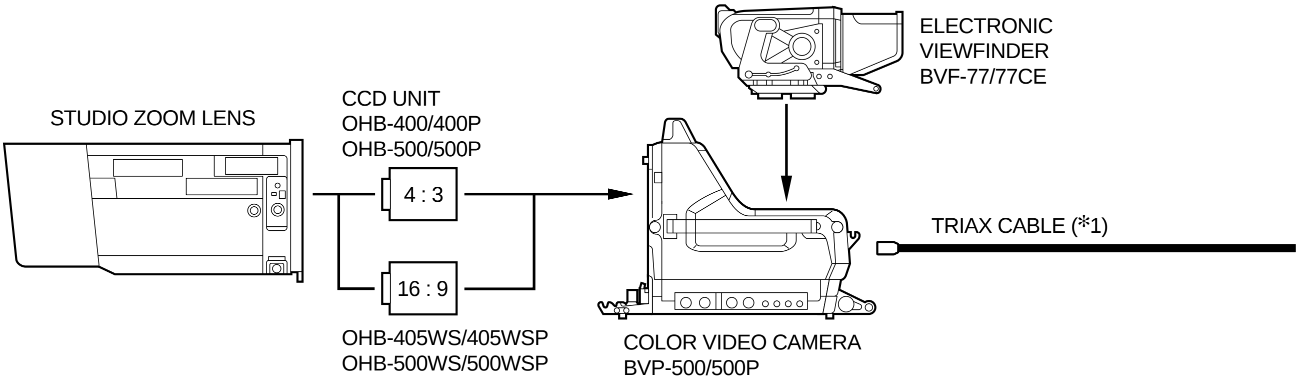
To set this switch, open the left side panel.

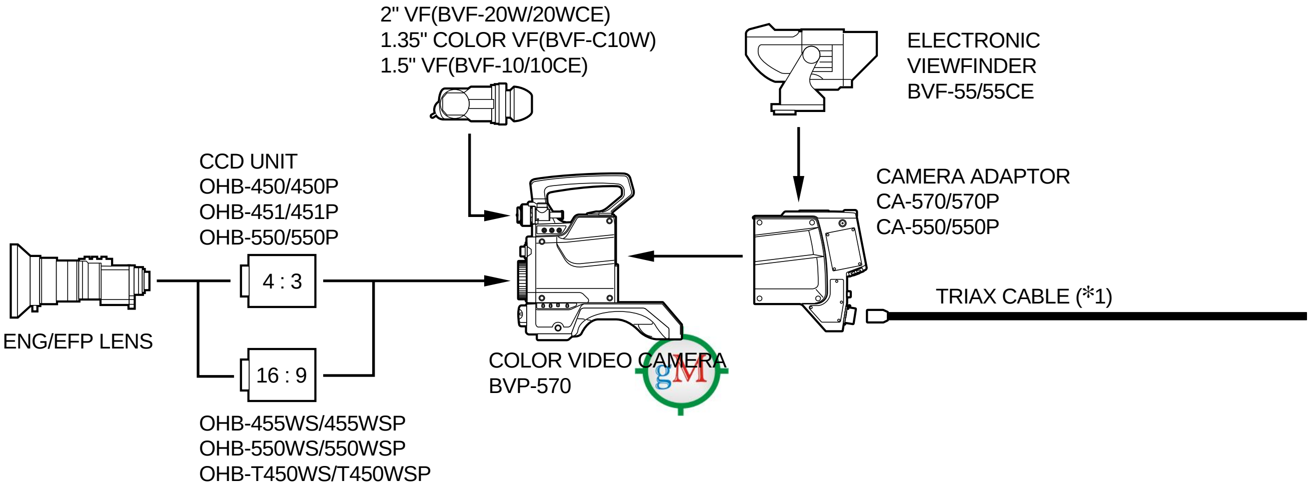
S1: PHANTOM POWER switch

Turn on when connecting the PHANTOM +48 V microphone to MIC connector.

Factory-set position: ON

1-6. Instance of System Configuration


ELECTRONIC
VIEWFINDER
BVF-77/77CE
STUDIO ZOOM LENS
CCD UNIT
OHB-400/400P
OHB-500/500P
4 : 3
16 : 9
OHB-405WS/405WSP
OHB-500WS/500WSP
TRIAX CABLE (*1)
COLOR VIDEO CAMERA
BVP-500/500P


2" VF(BVF-20W/20WCE)
1.35" COLOR VF(BVF-C10W)
1.5" VF(BVF-10/10CE)
ELECTRONIC
VIEWFINDER
BVF-55/55CE
CCD UNIT
OHB-450/450P
OHB-451/451P
OHB-550/550P
CAMERA ADAPTOR
CA-570/570P
CA-550/550P
4 : 3
TRIAX CABLE (*1)
ENG/EFP LENS
16 : 9
COLOR VIDEO CAMERA
BVP-570
OHB-455WS/455WSP
OHB-550WS/550WSP
OHB-T450WS/T450WSP

OTHER OPTIONAL ACCESSORIES

For BVP-570	ELECTRET CONDENSER MICROPHONE ECM-MS5
	MICROPHONE C-74 (Sony P/N 1-542-099-11)
	CRADLE SUSPENSION CRS-3P
	CARRYING CASE LC-303SFT
	WIDE SCREEN DSP BOARD BKP-5091

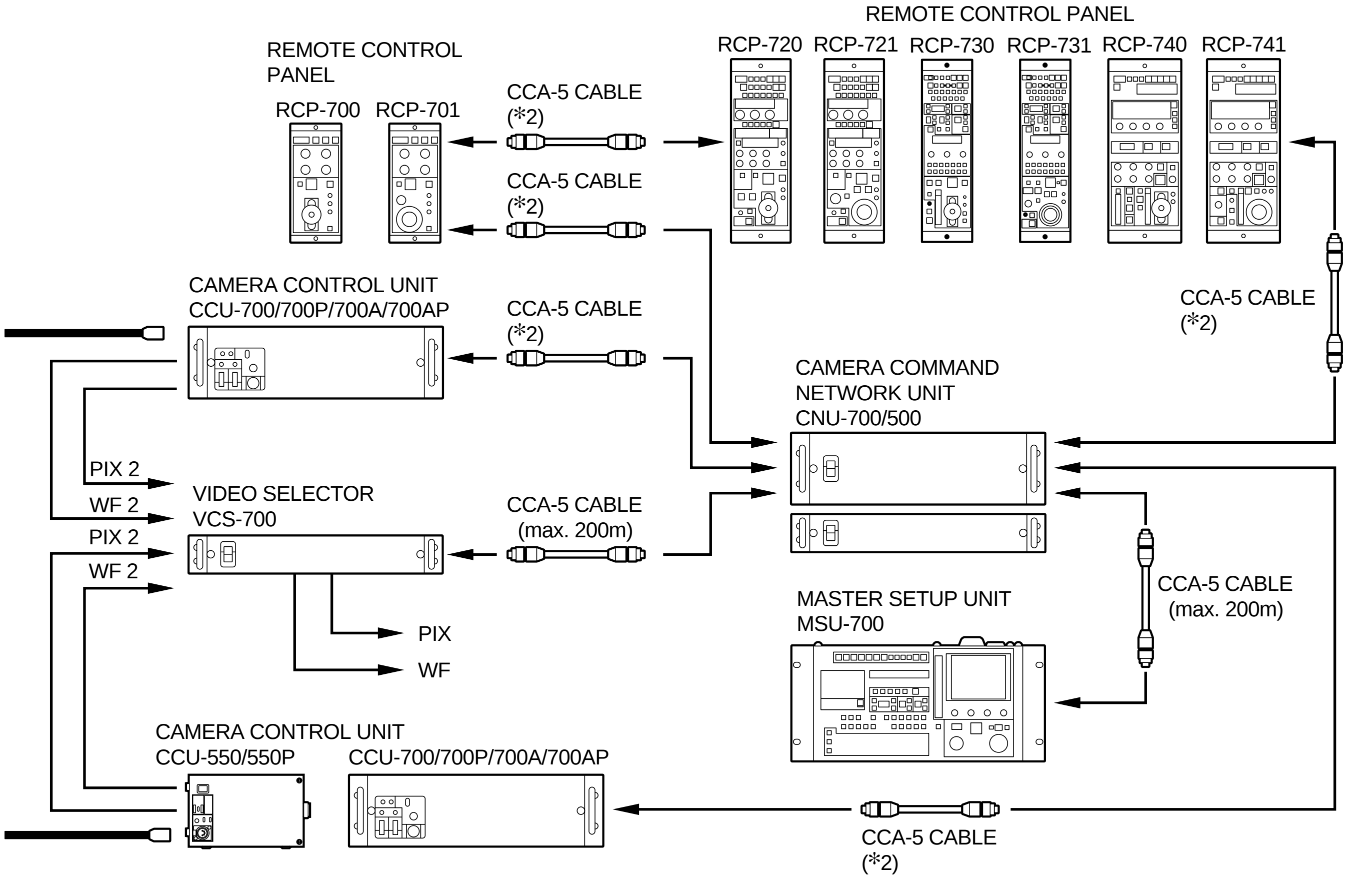
For CA-550/550P	TELEPROMPTER UNIT BKP-5971
For OHB-550/550WS OHB-455WS	FILTER UNIT BKDW-701
For BVP-500/500P	STANDALONE UNIT BKP-5910/5910P
	SCRIPT HOLDER BKP-7911/7912
	WIDE SCREEN DSP BOARD BKP-5091

*1: TRIAX CABLE LENGTH

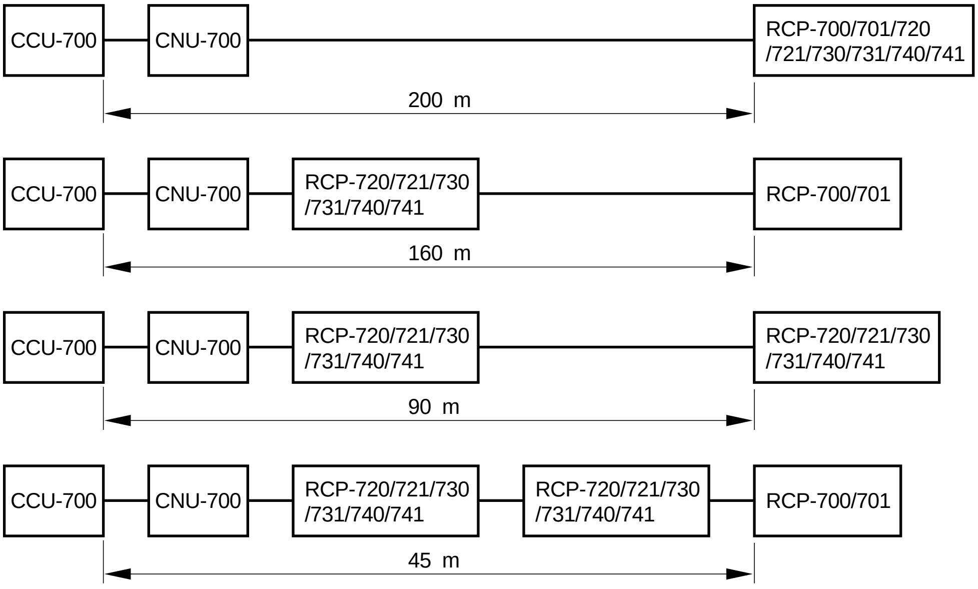
Diameter	Maximum length	
	CCU-700	CCU-550
8.5 mm	1000 m	700 m
14.5 mm	2000 m	1400 m

Diameter	Cable-length limitation for prompter signal transmission	
	CCU → CAM	CAM → CCU a)
8.5 mm	500 m	400 m
14.5 mm	1000 m	800 m

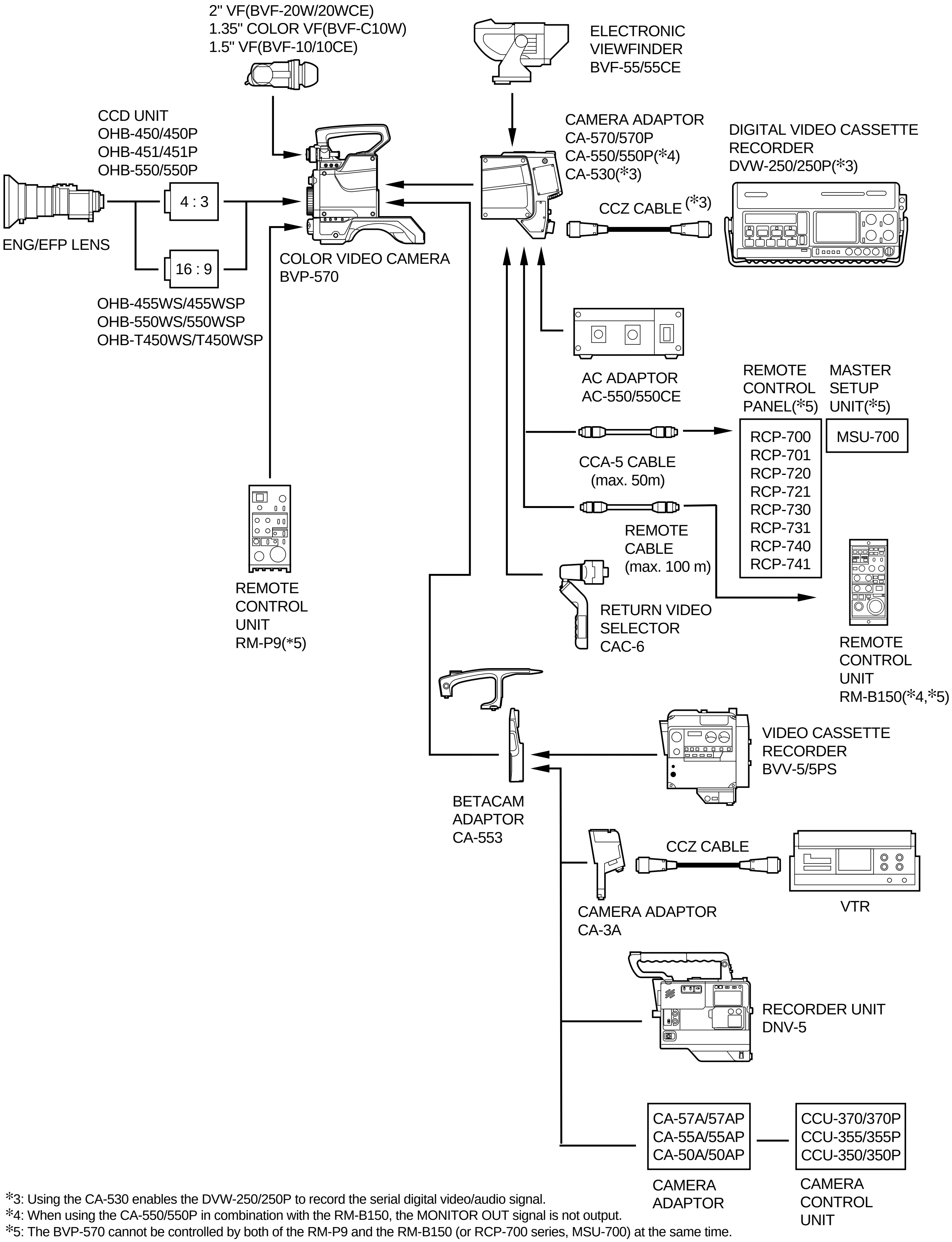
a) Only when using the CA-570/570P, the prompter signal can be sent from the camera to the CCU .


REMOTE CONTROL PANEL
RCP-720
RCP-721
RCP-730
RCP-731
RCP-740
RCP-741
REMOTE CONTROL PANEL
RCP-700
RCP-701
CCA-5 CABLE (*2)
CCA-5 CABLE (*2)
CAMERA CONTROL UNIT
CCU-700/700P/700A/700AP
CCA-5 CABLE (*2)
CCA-5 CABLE (*2)
CAMERA COMMAND NETWORK UNIT
CNU-700/500
PIX 2
WF 2
VIDEO SELECTOR
VCS-700
PIX 2
WF 2
CCA-5 CABLE (max. 200m)
CCA-5 CABLE (max. 200m)
PIX
WF
MASTER SETUP UNIT
MSU-700
CAMERA CONTROL UNIT
CCU-550/550P
CCU-700/700P/700A/700AP
CCA-5 CABLE (*2)

*2: CCA-5 CABLE LENGTH


CCU-700
CNU-700
RCP-700/701/720 /721/730/731/740/741
200 m
CCU-700
CNU-700
RCP-720/721/730 /731/740/741
RCP-700/701
160 m
CCU-700
CNU-700
RCP-720/721/730 /731/740/741
RCP-720/721/730 /731/740/741
90 m
CCU-700
CNU-700
RCP-720/721/730 /731/740/741
RCP-720/721/730 /731/740/741
RCP-700/701
45 m

1-6. Instance of System Configuration


2" VF(BVF-20W/20WCE)
1.35" COLOR VF(BVF-C10W)
1.5" VF(BVF-10/10CE)
ELECTRONIC
VIEWFINDER
BVF-55/55CE
CCD UNIT
OHB-450/450P
OHB-451/451P
OHB-550/550P
CAMERA ADAPTOR
CA-570/570P
CA-550/550P(*4)
CA-530(*3)
DIGITAL VIDEO CASSETTE
RECORDER
DVW-250/250P(*3)
4 : 3
16 : 9
ENG/EFP LENS
CCZ CABLE (*3)
COLOR VIDEO CAMERA
BVP-570
OHB-455WS/455WSP
OHB-550WS/550WSP
OHB-T450WS/T450WSP
AC ADAPTOR
AC-550/550CE
REMOTE
CONTROL
PANEL(*5)
MASTER
SETUP
UNIT(*5)
RCP-700
RCP-701
RCP-720
RCP-721
RCP-730
RCP-731
RCP-740
RCP-741
MSU-700
CCA-5 CABLE
(max. 50m)
REMOTE
CABLE
(max. 100 m)
REMOTE
CONTROL
UNIT
RM-P9(*5)
RETURN VIDEO
SELECTOR
CAC-6
REMOTE
CONTROL
UNIT
RM-B150(*4,*5)
VIDEO CASSETTE
RECORDER
BVV-5/5PS
BETACAM
ADAPTOR
CA-553
CCZ CABLE
CAMERA ADAPTOR
CA-3A
VTR
RECORDER UNIT
DNV-5
CA-57A/57AP
CA-55A/55AP
CA-50A/50AP
CCU-370/370P
CCU-355/355P
CCU-350/350P
CAMERA
ADAPTOR
CAMERA
CONTROL
UNIT

*3: Using the CA-530 enables the DVW-250/250P to record the serial digital video/audio signal.
*4: When using the CA-550/550P in combination with the RM-B150, the MONITOR OUT signal is not output.
*5: The BVP-570 cannot be controlled by both of the RM-P9 and the RM-B150 (or RCP-700 series, MSU-700) at the same time.

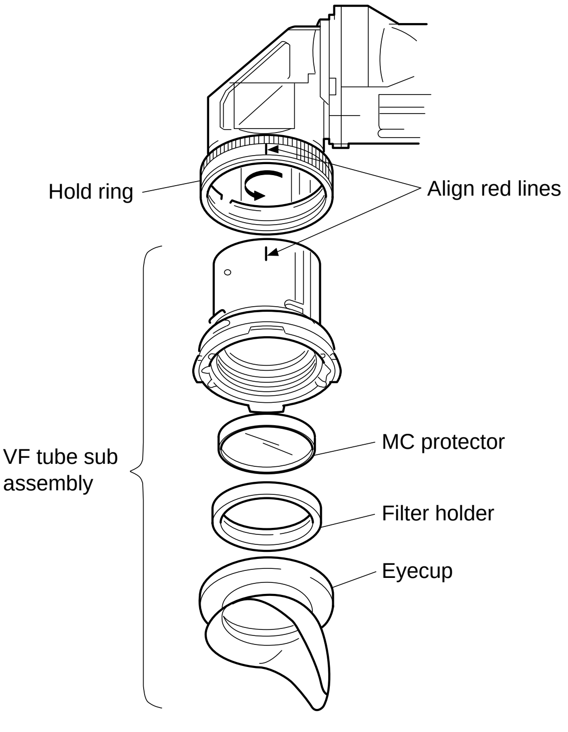
1-7. Optional Accessories for Viewfinder

The following accessories are available separately for the supplied viewfinder. Please order as necessary.

- VF Rotation Bracket BKW-401
  By fitting the BKW-401 to the camera, you can rotate the viewfinder out of the way so that your right leg does not hit the viewfinder while you are carrying the camera.

- Fog-proof Filter (Sony Part No. 1-547-341-11)
  Use in place of the MC protector shown in the figure.

- Lens Assembly for Aged Eye
  (Sony Part No. A-8262-537-A)
- Lens Assembly for Low Power
  (Sony Part No. A-8262-538-A)
- Lens Assembly (Standard magnification with special compensation for aberration)
  (Sony Part No. A-8267-737-A)
- High Performance (3×) Lens Assembly
  (Sony Part No. A-8314-798-A)
  Use in place of the VF tube sub assembly shown in the figure.



* To protect the viefinder lens from drops, put the MC protector in the filter holder and attach the eyecup securely.

1-8. 16:9/4:3 Selector Board (BVP-570 only)

When installing the OHB-405WS/405WSP/455WS/455WSP/T450WS/T450WSP/550WS/550WSP in the BVP-570, replace the termination board (CN-1672) on the processing board (PR-242) with the 16:9/4:3 selector board PR-243. The PR-243 board is separately available as a BKP-5091.
For details on installation, refer to the installation and maintenance manual supplied with the BKP-5091.
The PR-242 board should be provided with any of the 16:9/4:3 selector board and the termination board. If not, normal video will not appear.

Note

The PR-243 board has been installed in the BVP-570WSPK at the factory.

http://getMANUAL.com

Section 2
Service Overview

2-1. Note on Service

2-1-1. Standard Tightening Torque for Screws

The standard tightening torque for the screws used in the unit is as follows.

Screw type	Tightening torque
M2	19×10^{-2} N•m (1.9 kgf•cm)
M2.6	53×10^{-2} N•m (5.3 kgf•cm)
M2.6 (Precision)	40×10^{-2} N•m (4 kgf•cm)
M3	80×10^{-2} N•m (8 kgf•cm)
M4	140×10^{-2} N•m (14 kgf•cm)

2-1-2. Description on Backup Battery

Automatic adjustments and setting values are saved in the video camera's memory, even when the power is turned off. This information, however, is lost when the backup battery BT1 on the AT-126 board, which has a battery life of 1 year, becomes exhausted. If the battery voltage is low, the message "MEM.BATT.LOW AT BOARD" blinks in the viewfinder when you power on the unit. Replace the backup battery with a new one within a few days. If you do not replace the backup battery, the scene file and setting values set by Operation menu in the video camera's memory will be lost. When lost, reset the adjustment and setting values to their factory-set values referring to Section 2-1-4.

Replacing the Backup Battery

CAUTION

When replacing, ensure that the battery is installed with "+" and "–" poles connected to the correct terminals. An improper connection may cause an explosion or leakage of fluid.

The backup battery used in the unit is commercially available.

BT1/AT-126 board: CR2025 (commercially available)

2-1-3. Note on Replacement of Flash Memory

The flash memory with built-in ROM (IC36) are mounted on the AT-126 board. The program has been written into it at the factory.
If the flash memory requires replacing, be sure to replace it with a written one.
When replacing the flash memory, be sure to reset the adjustment and setting values to their factory-set values referring to Section 2-1-4.

2-1-4. Resetting Adjustment and Setting Values

When the data is lost because of the backup battery exhaustion or when replacing the flash memory, reset the adjustment and setting values to their factory-set values as follows.

1. Activating the Setup Menu of the camera

Set the DISP switch to the MENU side.

2. Clearing the RAM data

(1) Set the switches S1-1 to S1-4 on the AT-126 board as follows:

Note

Write down the original switch settings in advance.

S1-1	S1-2	S1-3	S1-4
ON	ON	ON	ON

(2) Power on the unit while pressing the CANCEL button.

(3) Power off the unit three seconds after powering on.

3. Loading data from the ROM

(1) Set the switches S1-1 to S1-4 on the AT-126 board as follows:

S1-1	S1-2	S1-3	S1-4
OFF	OFF	ON	ON

(2) Power on the unit while pressing the CANCEL button.

(3) Continue to press the CANCEL button until the message “Trimming File NG” is displayed on the viewfinder screen.

(4) Power off the unit.

4. Loading data from the EEPROM

(1) Set the switches S1-1 to S1-4 on the AT-126 board as follows:

S1-1	S1-2	S1-3	S1-4
OFF	ON	OFF	ON

(2) Power on the unit while pressing the CANCEL button.

(3) Continue to press the CANCEL button until the message “Paint Clear” is displayed on the viewfinder screen.

(4) Reset the switches S1-1 to S1-4 on the AT-126 board.

5. Executing the black auto setup

Set the AUTO W/B BAL switch on the camera front panel to BLK.

6. Executing the level auto setup

MENU : Operation
PAGE : Auto Setup (?8)
ITEM : Auto Level
(Press the MENU SELECT switch to ENTER to execute.)

2-1-5. Notes on Spare Parts

1. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

2. Stock of Parts

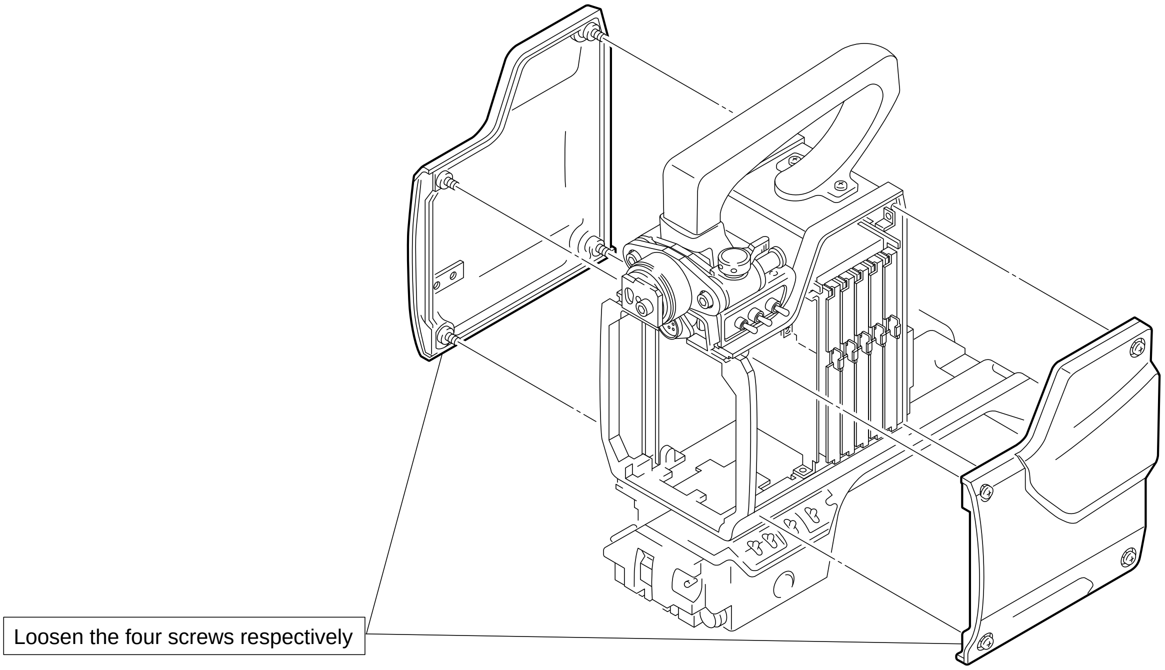
Parts marked with “o” at SP(Supply Code) column of the spare parts list may be not stocked. Therefore, the delivery date will be delayed.

3. Units Representation

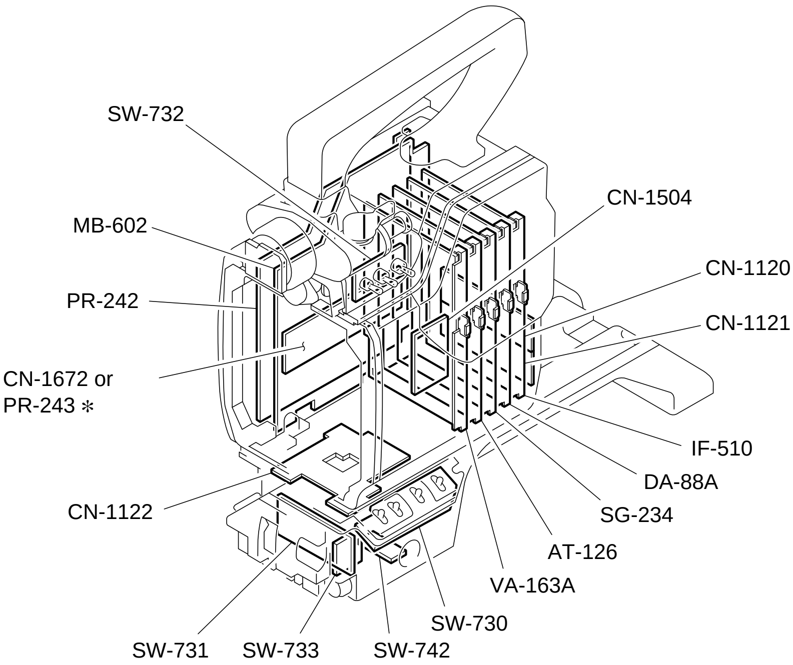
The following represented units are changed or omitted in writing.

Units		Representation
Capacitance	μF	uF
Inductance	μH	uH
Resistance	Ω	Abbreviation
Temperature	˚C	×××-DEG-C

2-2. Removing the Side Panels


Loosen the four screws respectively

2-3. Location of Printed Wiring Boards


SW-732
MB-602
PR-242
CN-1672 or
PR-243 ∗
CN-1122
SW-731
SW-733
SW-742
SW-730
VA-163A
AT-126
SG-234
DA-88A
IF-510
CN-1121
CN-1120
CN-1504

∗ Used when a 16:9/4:3
switchable CCD unit is incorporated.

2-4. Circuit Description

Circuit description for the camera and CCD unit is described here. The CCD unit OHB-450/451/455WS/550/550W series for the BVP-570 is available separately. The camera portion except the CCD unit is called as BVP, and OHB-450/451/455WS/550/550W series or CCD unit for the BVP-570WSPK is called as OHB in this section.

(1) CCD Drive System (OHB)

TG-159/195 board

The TG-159/195 outputs the pulses for driving the CCD to the DR-271 board and outputs the pulses for sampling the CCD output to the PA-181/213 board.
The driving pulses are synchronized with the HD and VD pulses input from the BVP and are output. Pulses are generated from the VCO clock (36 MHz) of the board. The clocks for the digital processing circuit (36 MHz, 18 MHz)are also output to the BVP.
CCD V-sub voltage, white shading data and so on are also stored in the EEPROM of the TG-159/195 board.

DR-271 board

The DR-271 board converts the pulses from the TG-159/195 board to directly drive the CCD. The converted pulses are transmitted to the CCD via the BI-91(R)/91(G)/91(B) board respectively. The board also has a circuit which makes +29 V from +15 V for the V-sub voltage. Furthermore, the board also has an interface circuit for the optical filter.

BI-91(R)/91(G)/91(B) board

The CCDs are mounted on the BI-91(R)/91(G) /91(B) boards. These boards supply the driving pulses and control voltages to the CCD.
The signals output from the CCD are sent to the PA-181/213 board via the emitter follower.

PA-181/213 board

The PA-181/213 board extracts video signals from the CCD signals output from the BI-91(R) /91(G)/91(B) boards by a correlated double sampling circuit, and amplifies the R and G signals by one time, and the B signal by three times. The resultant signals are output to the VA-163A board of the BVP.

DR-302 board (OHB-451/451P only)

The DR-302 is a driving board for one optical filter disk, which motor-drives a filter selected by the RCP or MSU.
The DR-302 board consists of a motor-drive circuit, and a servo circuit comprised of a selected filter detection and filter position voltage generation circuits.

(2) Video Signal System

VA-163A board

The VA-163A board amplifies the video signals output from the OHB and performs the following processes:

- Black shading correction
- Gain-up control
- Blanking cleaning
- White shading correction
- Feedback clamping
- White balancing
- Flare compensation, and
- Pre-knee

In addition, it also switches between the video signals, TEST SAW(TEST1) signal and 3-STEP TEST(TEST2) signal.

PR-242 board

The PR-242 board converts the analog R, G, and B video signals into digital signals with the 12-bit A/D converter having sampling/holding functions.

It generates clocks required for the A/D conversion and the digital process circuit from the clocks generated by the OHB.

In addition, the PR-242 board adds a linear matrix and detail signals to the analog-to-digital-converted R, G and B signals.

It performs the processes such as pedestal control, black gamma correction, gamma correction, knee correction, knee saturation and white clipping for the signals. It also performs the followings.

- Generates an internal color-bar signal and switches between this signal and the main line signals.
- Creates detail and aperture signals from the digital R and G signals.
- Creates four kinds of skin tone gate signals. (one of them is for skin auto iris)
- Detects signals for auto white/black balancing, auto hue detection, auto iris and auto knee.
- Detects black/white shadings, generates a waveform to compensate them and outputs the waveform to the VA-163A board.
- Detects the black level and outputs the feedback clamp voltage to the VA-163A board.
- Generates TEST SAW waveforms and output them to the VA-163A board.

The video signals that have thus been digital-processed, are then converted to the Y, R-Y and B-Y signals. Some signals are output to the DA-88A board and the others are output via the MB-602 board as digital video signals output at the same time. The C signal is generated from the R-Y and B-Y signals with the color encoder IC on the PR-242 board. These Y and C signals are sampled at 36-MHz rate and quantized by 10 bits to be digital-to-analog converted. The resultants are then output to the DA-88A board as the monochrome signal for VF or modulated chroma signal. The monochrome signal for VF has the zebra signal for level indication, character signal and center marker signal on it. In addition, it has the VF detail signal, which is used to vary the detail level for the above-mentioned monochrome signal, independently of the detail signal for the main line signals. The wide-band luminance signal is sampled at 36-MHz rate and quantized by 10 bits independently to be digital-to-analog converted. The resultant is output to the DA-88A board after the blanking cleaning is performed and the SYNC signal is added to that signal.

DA-88A board

The monochrome signal for VF (VF Y) sent from the PR-242 board goes through a lowpass filter and is output to the IF-510 board. The wide-band luminance signal Hi-Ys is output via a lowpass filter to the camera adaptor as the Y signal. The Y signal is used for generating the two signals. One is the Y RF signal for TRIAX transmission and the other is the VTR Y signal. The modulated chroma signal C goes through a black clamp circuit and lowpass filter and is added to the Hi-Ys. The resultant is output to the IF-510 board as the VBS signal. The Y, R-Y and B-Y signals, that are input from the PR-242 board as the digital video signals, are aligned in phase with video signals in another channels by a digital delay line. The resultant is digital-to-analog converted and is then output via a lowpass filter to the IF-510 board. On the other hand, an analog component signal is generated in combination with the above-mentioned Hi-Ys signal, R-Y and B-Y signals. The analog component signal is controlled, on the level adjustment and reference signal addition, by the AT-126 board according to equipment connected to the camera (VTR or CCU). The analog component signal is output to external equipment via the 68P interface connector.

IF-510 board

Input signals at the IF-510 board are as follows;

Signals from the DA-88A board: VF Y, VBS, Y, R-Y and B-Y

Signals from external equipment: Reference signal for external synchronization, Return video signal

By combination with these signals, the IF-510 board outputs the following signals.

- VBS OUT signal
  Output via a buffer amplifier to external equipment.
- VBS OUT signal for RM
  Output to an interface connector for a remote control unit RM-P9. Using the setup menu, a character signal to confirm the menu setting can be mixed to this signal.
- TEST OUT signal
  With the signal select switch at the right top of the camera, the above-mentioned VBS OUT signal, the VBS OUT signal for RM or the VF Y signal can be selected as a TEST OUT signal output at the TEST OUT connector.
- VF OUT/MONI OUT signal
  The same signal is output as the VF OUT signal and the MONI OUT signal. One of the return video or reference signal selected by S1, VF Y, and VBS on the IF-510 board, is selected. The selected signal is mixed with a center marker and safety-zone pulse, and is then output. The VF OUT signal is output at the VF connector and the MONI OUT signal is output at the 68P interface connector.
- R/G/B output signals
  The Y, R-Y and B-Y signals are converted to the R, G and B signals by a matrix circuit. The converted signals are output at the 68P interface connector.
- Y/R-Y/B-Y output signals for VF
  These signals are for a color viewfinder. A character signal and SKIN GATE signal are mixed with the above-mentioned Y, R-Y and B-Y signals. The resultants are output to the VF.
  In addition, the IF-510 board is equipped with the following circuits.
- HD/VD external sync circuit
  When displaying the return video or reference signal on the viewfinder screen, it is necessary to synchronize the cursor signal with those signals. And a sync signal is separated from those signals to generate the external HD and VD signals, and the resultant is sent to the cursor signal generation circuit on the PR-242 board.
- Transmits the SKIN GATE signal from DA-88A board to the CCU via the 68P interface connector.

(3) Auto system

AT-126 board

The AT-126 board consists of a microcomputer which controls the camera according to the instructions stored in a ROM. Operations of the board are listed below;

- Analyzes instructions of the function switches, video system detection data and analog data.
- Outputs various control signals and compensation signals to the boards.
- Outputs status information and self-diagnosis information as character data from the character generator.
- Incorporates the interface function with the RM-P9 or the CCU-700A/700AP.

(4) Pulse system

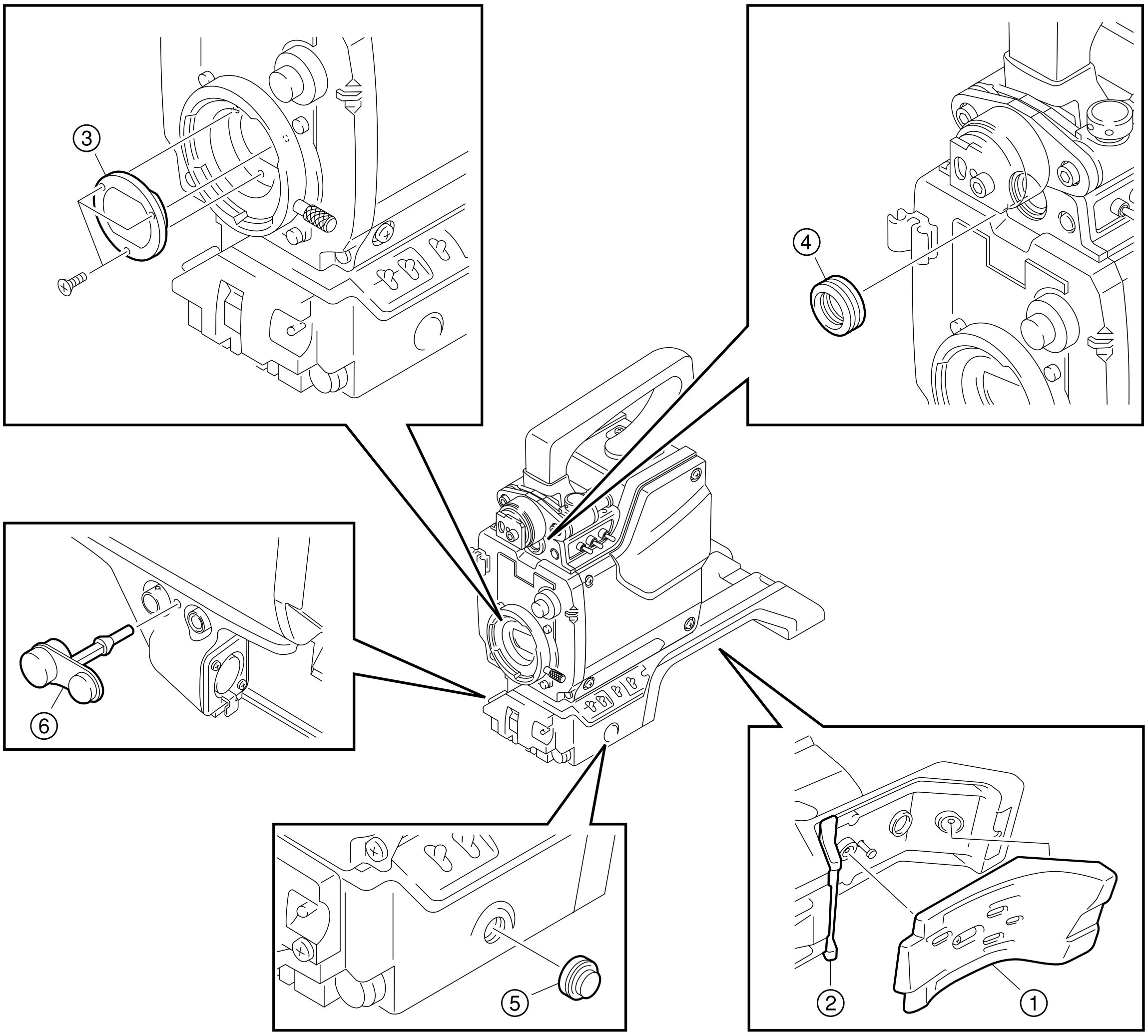
SG-234 board

The SG-234 board has a sync signal generator which generates various sync signals for the camera. The sync signals are generated from the clock pulse input from the OHB via the PR-242 board. They are output to the board of the camera, OHB and the camera adaptor (CA) respectively. This generator has two modes to synchronize with a reference signal input for external synchronization. One is the VBS input mode when the camera is used alone and the other is the V RESET/H CONT mode when the CCU is connected to the camera. Input channels of the V RESET and H CONT signals differ depending on the type of CA in connection with the camera.

2-5. Recommended Replacement Parts

Parts listed below are recommended replacement parts. Optical filter unit may be turned cloudy with the lapse of time. If using a cloudy filter, the performance of the camera will not be delivered. Replace it according to necessary.
Parts made of rubber used in the unit are subject to cracks with the lapse of time. Visually check them sometimes and replace them according to necessary.

Fig No.	Description	Sony P/N	Remarks
①	PAD ASSY (LARGE)	A-8278-237-A	rubber
②	PAD ASSY (SMALL)	A-8278-238-A	rubber
③	FILTER UNIT, OPTICAL	1-467-820-2X	for OHB-455WS/550WS
	FILTER UNIT, OPTICAL	1-547-579-2X	for OHB-550
	FILTER UNIT, OPTICAL	1-547-845-2X	for OHB-450/451
④	PACKING, VF	3-710-024-0X	rubber
⑤	COVER, SW	3-676-244-1X	rubber
⑥	CAP, CONNECTOR	3-692-644-0X	rubber



2-6. Cleaning

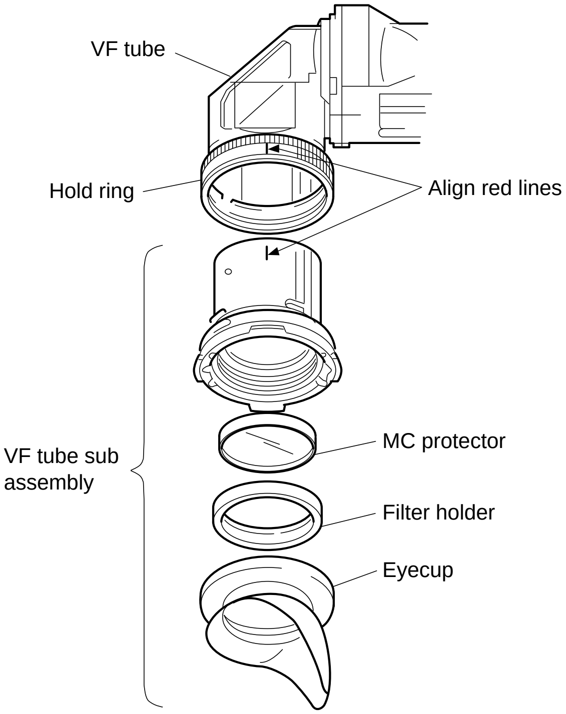
2-6-1. Cleaning Viewfinder (Option)

By extracting VF tube sub assembly, lens and MC protector can be easily cleaned. And also dust on the CRT surface or mirror can be easily cleaned off.

1. Turn the hold ring to counterclockwise and extract the VF tube sub assembly.
2. Detach the eyecup.
3. Remove the filter holder with the MC protector installed.
4. Wipe the lens and the MC protector with a commercially available lens cleaner.
5. After the cleaning is completed, install by reversing the preceding steps. Align red lines of the VF tube and VF tube sub assembly when inserting, and turn the hold ring to clockwise until it locks.

Notes

- Do not use any type of solvent, such as alcohol, benzine or thinner to remove stains.
- Be sure to attach the eyecup to the viewfinder, or the MC protector may come off.
- To protect the viewfinder lens from drops, securely put the MC protector in the filter folder and attach the eyecup to the viewfinder.



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2-6-2. Cares after Using at Special Environment

It is recommended to check the following items after using the camera at seaside, dust area or spa.

1. Clean off sand and other dust in the unit carefully.
2. Do not allow salt in seawater or sulfur in spa to contact a not-painted surface of the cabinet. They may cause to corrode. Clean with alcohol immediately if contacted.
3. Clean the connection surface of connectors.
4. Carry out the common operation check and confirm that the unit normally operates.

2-7. Disconnecting/Connecting the Flexible Card Wire

The flexible card wires are used between the CN-1504 board and the CCD unit, and the MB-602 board and the CN-1120/1121/1122/1504/PR-242 boards. Be careful not to bend these wires. This shortens the wire life.

Disconnecting

1. Turn off the power of the camera.

Type A

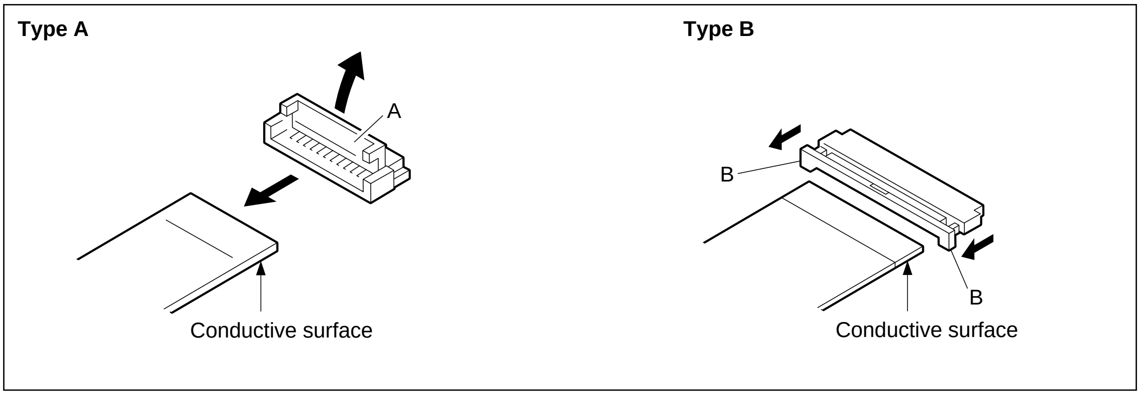
(between the MB-602 board and CN-1504 board, between the CN-1504 board and CCD unit)

2. Lift up the portion A in the direction of the arrow and disconnect the flexible card wire.

Type B

(between the MB-602 board and CN-1120/1121/1122/PR-242 boards)

2. Slide portion B in the direction of the arrow and disconnect the flexible card wire.



Connecting

Notes

- Be careful not to insert the flexible card wires obliquely.
- Check that the conductive surface of the flexible card wire is not soiled with dust.

Type A

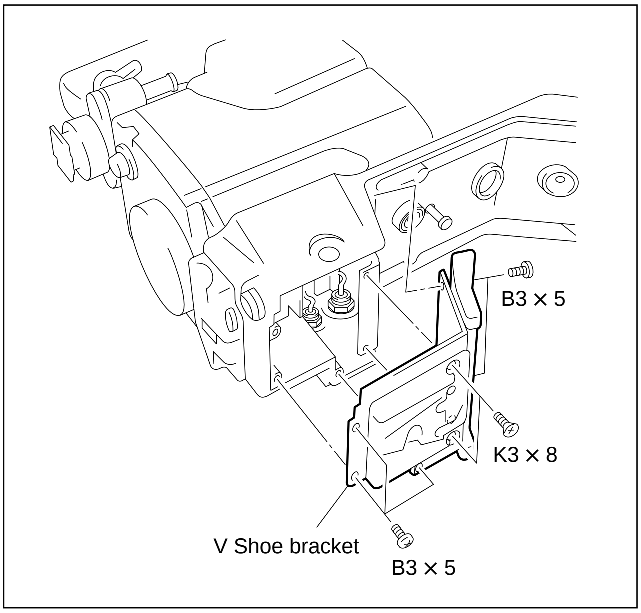
1. Lift up the portion A in the direction of the arrow. Insert the flexible card wire as far as it will go into connector with the conductive surface of the wire put down.
2. Push down the portion A to secure the flexible card wire.

Type B

1. Slide portion B in the direction of the arrow and insert the flexible card wire as far as it will go into connector with the conductive surface of the wire put down.
2. Slide portion B in the opposite direction of the arrow and lock.

2-8. Removing the V Shoe Bracket

1. Remove the seven screws to remove V shoe bracket.

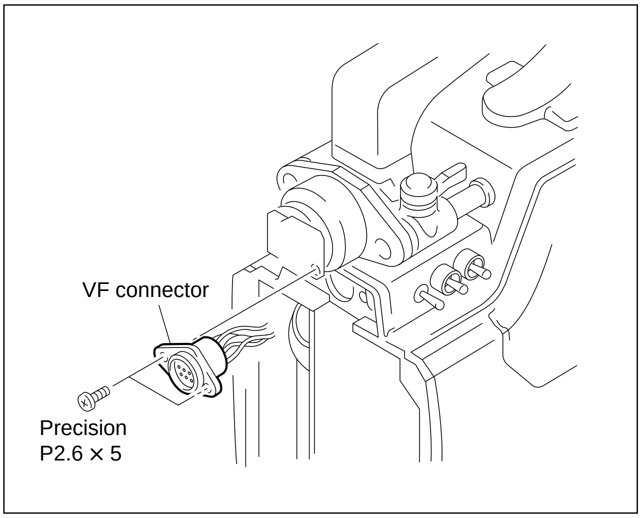

B3 × 5
K3 × 8
V Shoe bracket
B3 × 5

2. Install in the reverse order of removal.

2-9. Replacing External Connectors

2-9-1. VF Connector

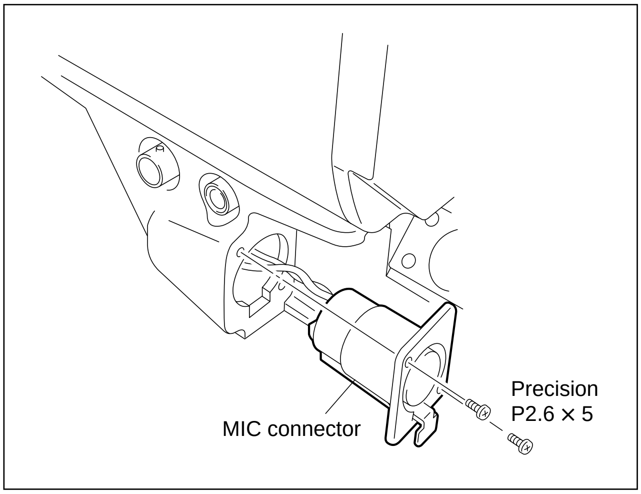
1. Remove the CCD unit. (Refer to the operation manual.)
2. Remove the two screws to pull out the VF connector. Desolder the VF connector.


VF connector
Precision
P2.6 × 5

3. Install a new connector in the reverse order of removal.

2-9-2. MIC Connector

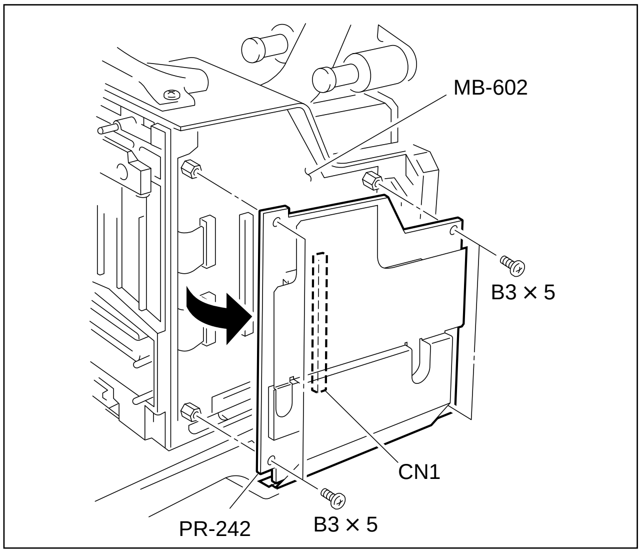
1. Remove the two screws to pull out the MIC connector. Desolder the MIC connector.


Precision
P2.6 × 5
MIC connector

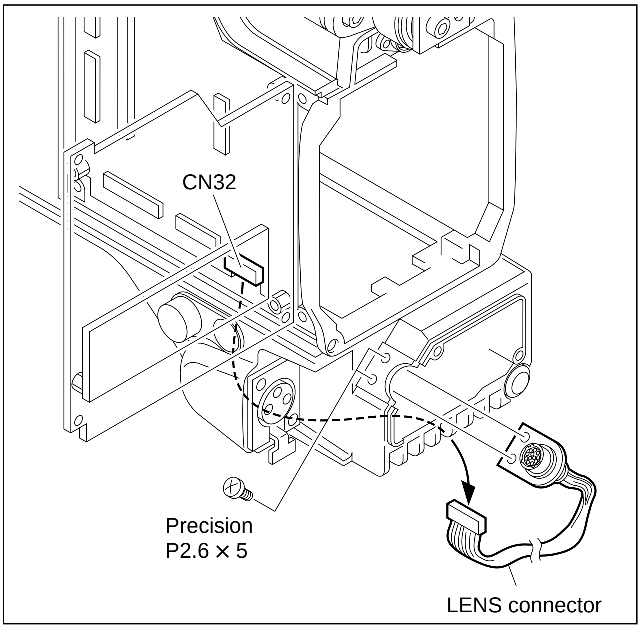
2. Install a new connector in the reverse order of removal.

2-9-3. LENS Connector

1. Remove the CCD unit. (Refer to the operation manual.)
2. Remove the V shoe bracket. (Refer to Section 2-8)
3. Remove the left side panel.(Refer to Section 2-2)
4. Remove the four screws and disconnect the connector (CN1). Open the PR-242 board to the arrow direction.



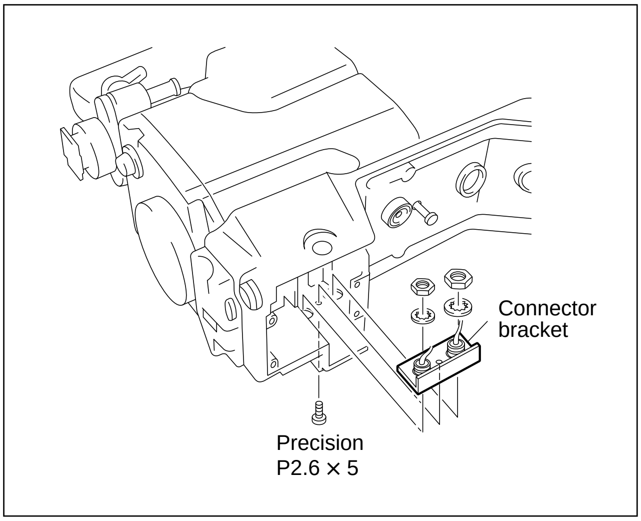
5. Perform steps 1 and 2 in Section 2-11-2 "Front Switch Panel Block" to remove the front panel switch.
6. Remove the two screws and disconnect the connector (CN32) to remove the LENS connector. Desolder the LENS connector.



7. Install a new connector in the reverse order of removal.
   Note at Installation
   Be sure to lock the two screws securing the LENS connector with a screw locking compound.

2-9-4. TEST OUT/REMOTE Connectors

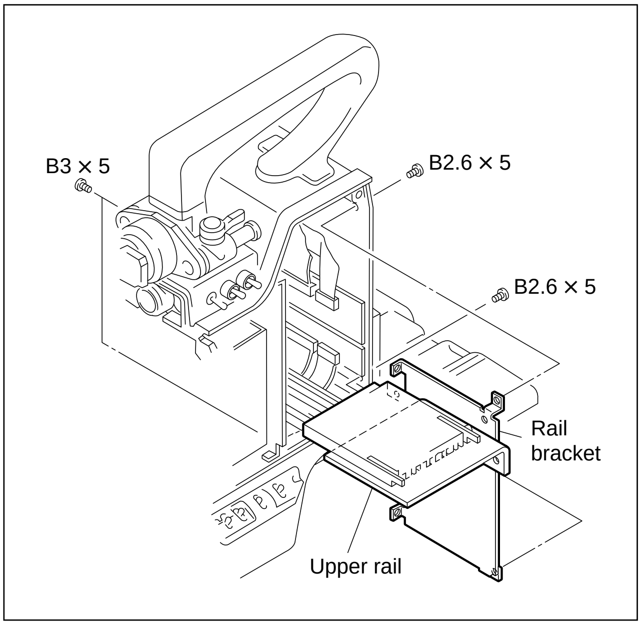
1. Remove the V shoe bracket. (Refer to Section 2-8.)
2. Remove the screw and the connector bracket.
3. Remove each nut and remove the TEST OUT/ REMOTE connector.
4. Desolder the connector to be replaced.



5. Install a new connector in the reverse order of removal.
   Note at Installation
   After securing the connector with the nut, be sure to lock it with a screw locking compound.

2-9-5. 68P Connector

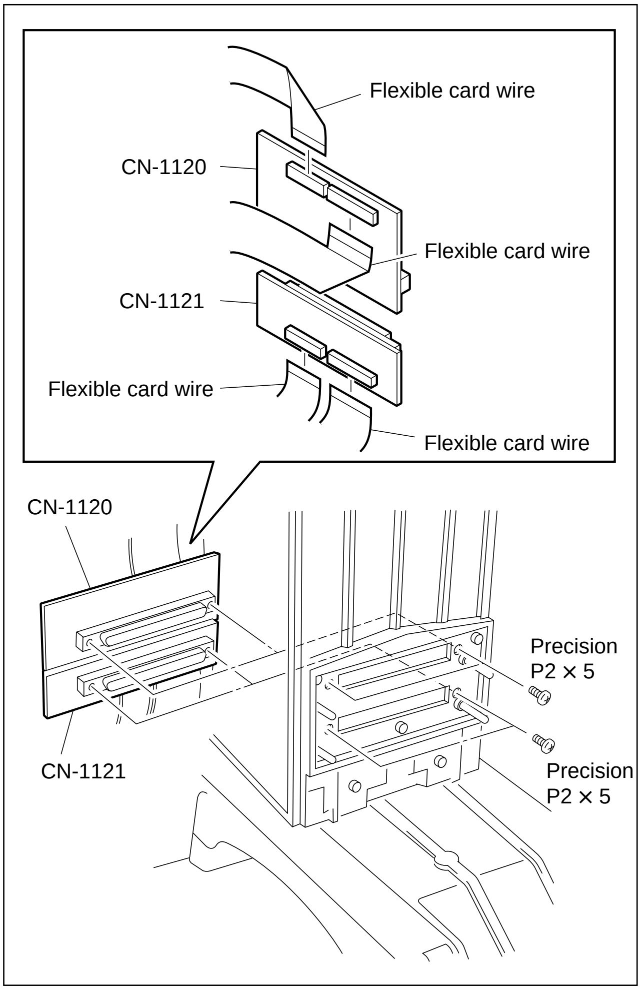
1. Remove the right side panel of the camera. (Refer to Section 2-2.)
2. Pull out the five plug-in boards and the four shielding plates.
3. Remove the DC/DC convertor unit. (Refer to Section 2-13.)
4. Remove the upper rail.
5. Remove the four screws and remove the rail bracket.


B3 × 5
B2.6 × 5
B2.6 × 5
Rail bracket
Upper rail

6. Remove the two screws and remove the CN-1120/1121 board.
7. Disconnect the two flexible card wires each.

Note

When disconnecting the flexible card wires, refer to Section 2-7 "Disconnecting/Connecting of Flexible Card Wires".


Flexible card wire
CN-1120
Flexible card wire
CN-1121
Flexible card wire
Flexible card wire
CN-1120
Precision P2 × 5
CN-1121
Precision P2 × 5

8. Install a new connector in the reverse order of removal.

2-10. Replacing Printed Wiring Board

2-10-1. Description on EEPROM Data

The table below gives the holding data of EEPROM on every printed circuit board.

Board	Ref.No.	Holding data
VA-163A	IC26	VA-163A adjustment data
AT-126	IC46	Trimming/Reference files
SG-234	IC21	SG-234 adjustment data
DA-88A	IC10	DA-88A adjustment data
IF-510	IC155	IF-510 adjustment data
MB-602	IC5	Model name, Serial number of the unit

Note

The IC listed above cannot be replaced because it is the EEPROM that is holding data inherent in the board. The part number listed in Section 6 “Spare Parts” is for an EEPROM which is not programmed. If replacement is needed, consult your local Sony Sales Office/Service Center.

2-10-2. Adjusting Items Required After Replacing the Board

If no adjustment item is listed, no adjustment is required after replacement.

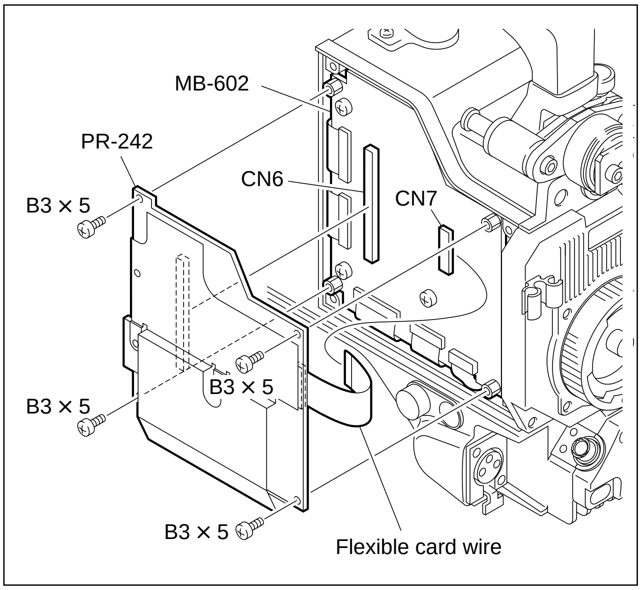
Board	Adjustment required
AT-126	—
CN-1120	—
CN-1121	—
CN-1122	—
CN-1672	—
CN-1504	—
DA-88A	—
IF-510	—
MB-602	—
PR-242	—
SG-234	—
SW-730	—
SW-731	—
SW-732	—
SW-733	—
SW-742	—
VA-163A	—
OHB Block	Section 4. Adjustment for OHB Installation

2-10-3. Replacing the MB-602 Board

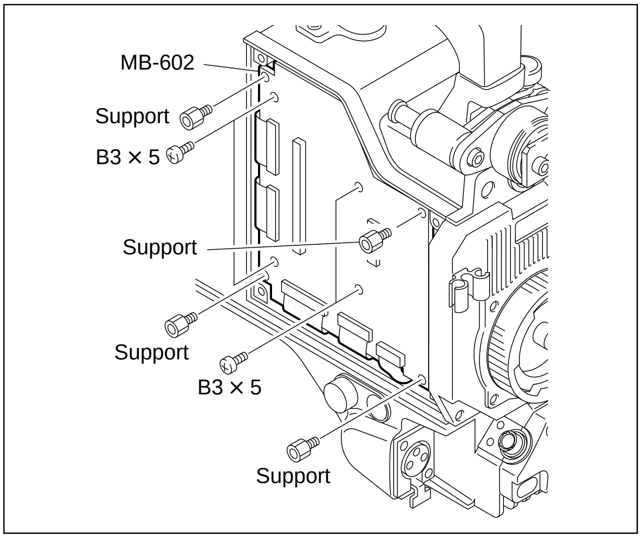
Note

When disconnecting the flexible card wires, refer to Section 2-7 “Disconnecting/Connecting of Flexible Card Wires”.

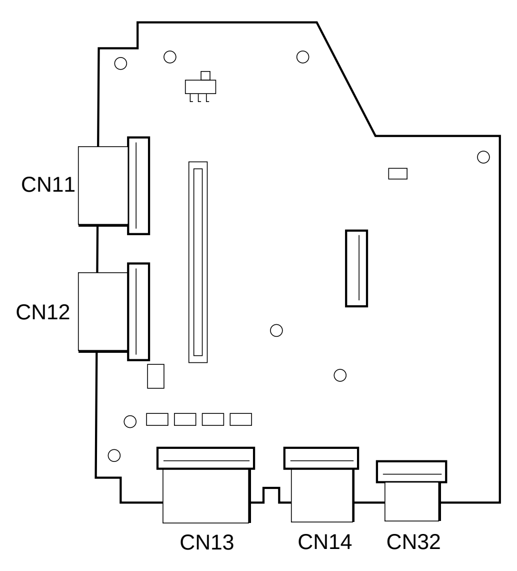
1. Remove the right and left side panels of the camera. (Refer to Section 2-2.)
2. Pull out the five plug-in boards.
3. Disconnect the flexible card wire from CN7 on the MB-602 board.
4. Remove the four screws and remove the PR-242 board from CN6 on the MB-602 board.


MB-602
PR-242
CN6
CN7
B3 × 5
B3 × 5
B3 × 5
B3 × 5
Flexible card wire

5. Remove the four screws and remove the four supports.


MB-602
Support
B3 × 5
Support
Support
B3 × 5
Support

6. Disconnect the connector CN32 and the four flexible card wires. Remove the MB-602 board.

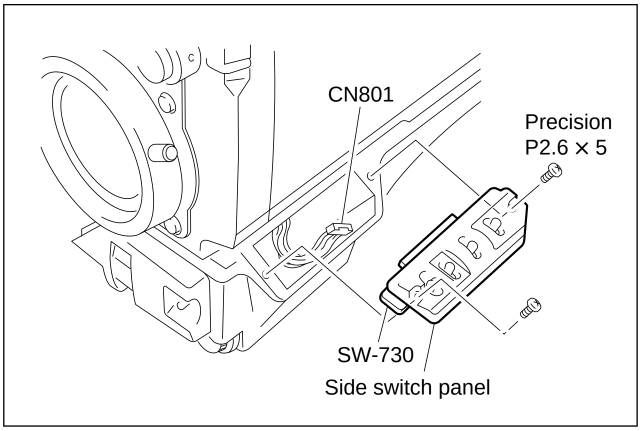

CN11
CN12
CN13
CN14
CN32

7. Install a new board in the reverse order of removal.

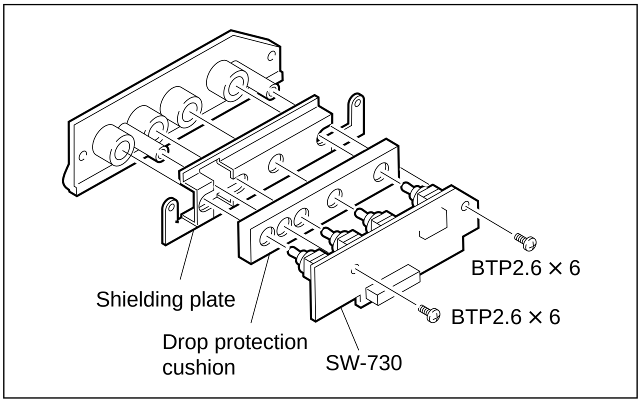
2-11. Replacing Function Switches

2-11-1. Side Switch Panel Block

1. Remove the two screws and remove the side switch panel.
2. Disconnect the connector CN801 on the SW-730 board.


CN801
Precision
P2.6 × 5
SW-730
Side switch panel

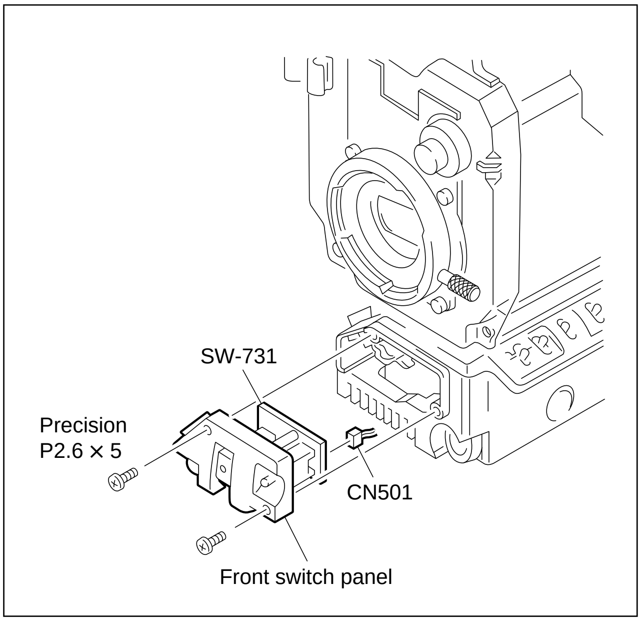
3. Remove the two screws. Remove the SW-730 board, shielding plate and drop protection cushion.
4. Desolder the switch to be replaced.


BTP2.6 × 6
BTP2.6 × 6
Shielding plate
Drop protection
cushion
SW-730

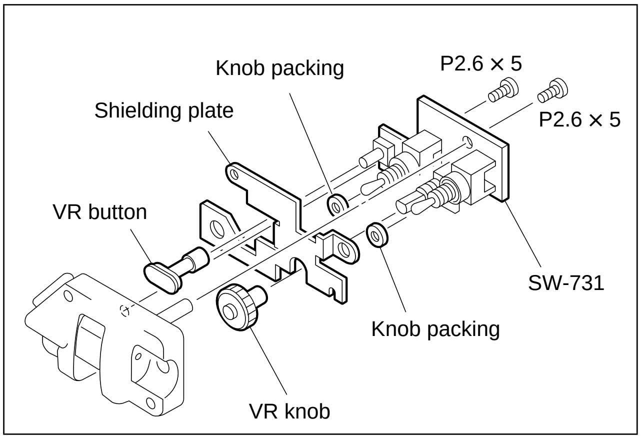
5. Install a new switch in the reverse order of removal.

2-11-2. Front Switch Panel Block

1. Remove the two screws and remove the front switch panel.
2. Disconnect the connector CN501 on the SW-731 board.


SW-731
Precision
P2.6 × 5
CN501
Front switch panel

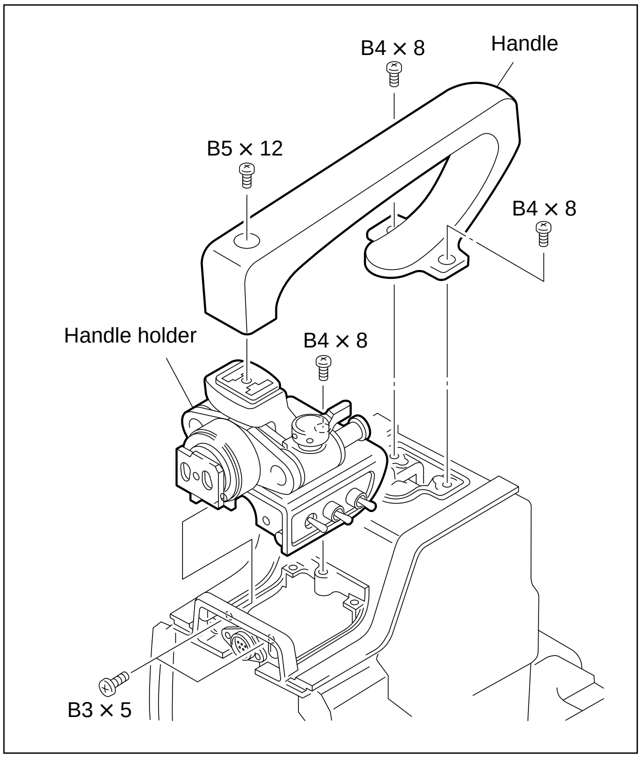
3. Remove the two screws. Remove the SW-731 board, two knob packings, VR button, VR knob and shielding plate.
4. Desolder the switch to be replaced.


Knob packing
P2.6 × 5
Shielding plate
P2.6 × 5
VR button
SW-731
Knob packing
VR knob

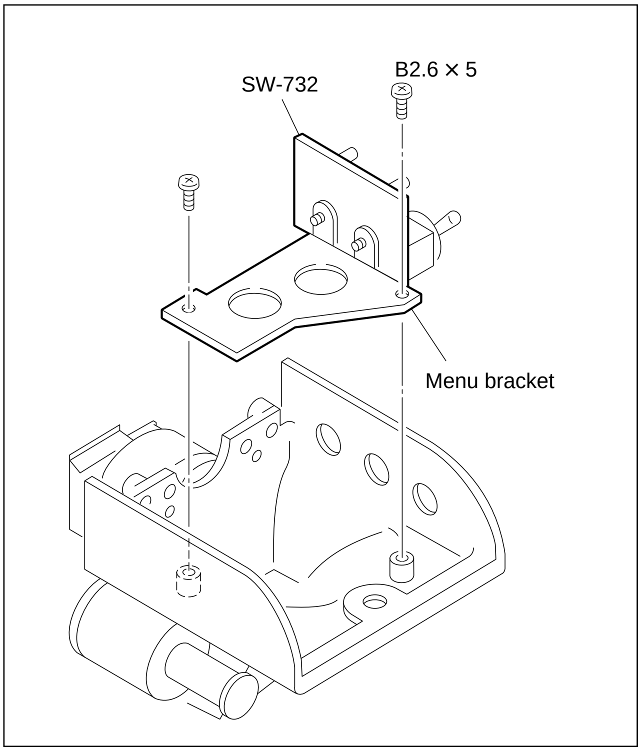
5. Install a new switch in the reverse order of removal.

2-11-3. VF DISP Switch

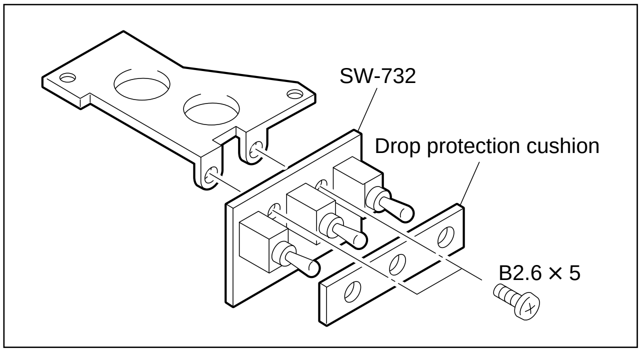
1. Remove the CCD unit. (Refer to the operation manual.)
2. Remove the three screws and remove the handle.
3. Remove the three screws and remove the handle holder.


B4 × 8
Handle
B5 × 12
B4 × 8
Handle holder
B4 × 8
B3 × 5

4. Remove the two screws and remove the menu bracket.


SW-732
B2.6 × 5
Menu bracket

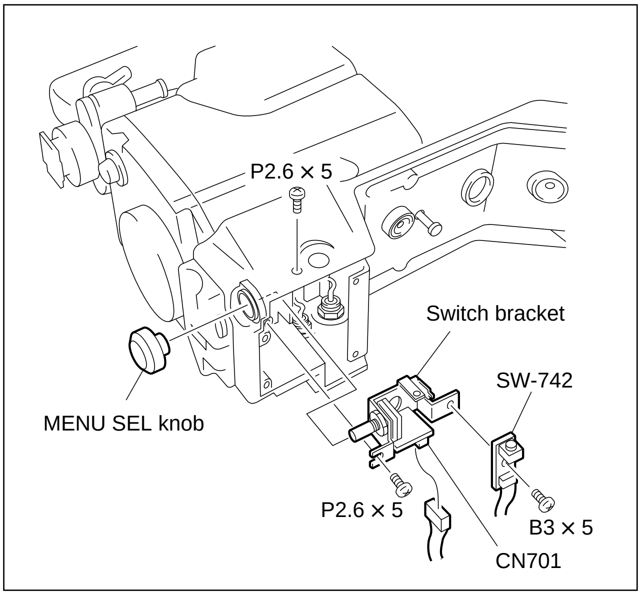
5. Remove the two screws and remove the SW-732 board and the drop protection cushion.
6. Desolder the switch to be replaced.


SW-732
Drop protection cushion
B2.6 × 5

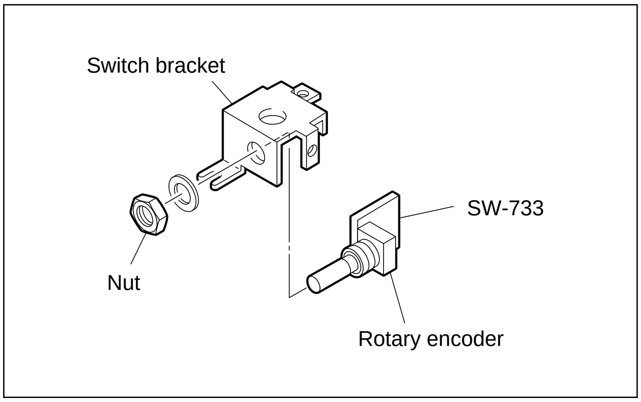
7. Install a new switch in the reverse order of removal.

2-12. Replacing MENU SEL Knob (Rotary Encoder)

1. Remove the V shoe bracket.(Refer to Section 2-2.)
2. Remove the screw (B3 × 5) securing the SW-742 board.
3. Pull out the MENU SEL knob.
4. Remove the two screws and disconnect the connector CN701. Remove the SW-733 board with the switch bracket.


P2.6 × 5
Switch bracket
SW-742
MENU SEL knob
P2.6 × 5
B3 × 5
CN701

5. Remove the nut and remove the SW-733 board.
6. Desolder the rotary encoder.


Switch bracket
SW-733
Nut
Rotary encoder

7. Install a new rotary encoder in the reverse order of removal.

   Note at Installation

   After securing the rotary encoder with the nut, be sure to lock it with a screw locking compound .

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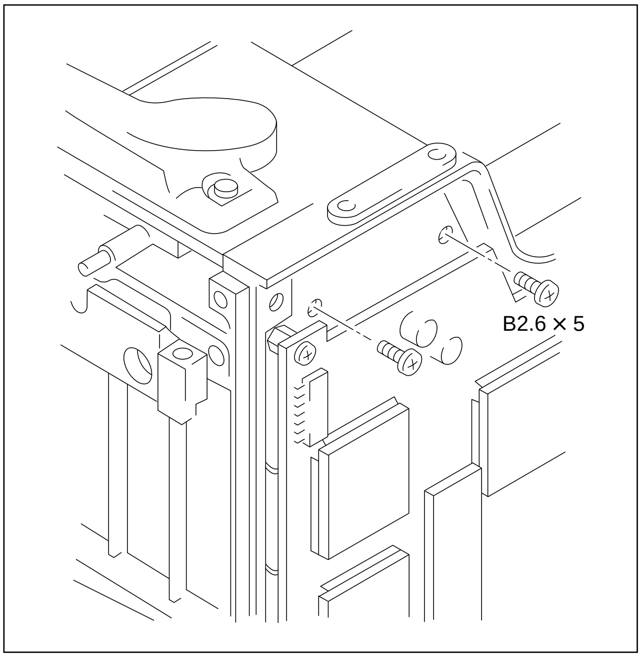
2-13. Replacing DC/DC Convertor Unit

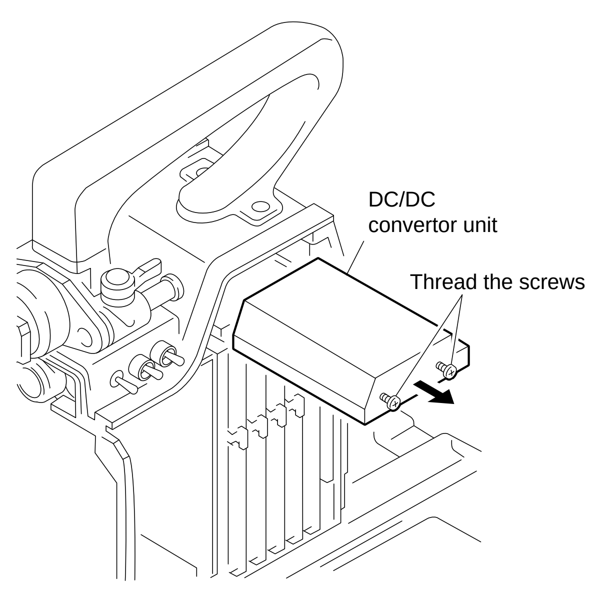
1. Remove the right and left side panels of the camera. (Refer to Section 2-2.)
2. Remove the two screws from the left side of the camera shown in the figure.



3. Thread the two screws that were removed in Step 2, into the holes of the DC/DC convertor unit just three turns.

   Note

   Never turn the two screws more than three turns.
4. Hold the two screws with hands and pull the DC/DC convertor unit.



5. Install a new DC/DC convertor unit by pushing with hands.

   Secure it to the MB-602 board with the two screws that were removed in Step 2.

2-14. Optional Fixtures List

Description	Sony P/N	Remarks
Burst chart	J-6026-110-A	
Grayscale chart (transparent, 4:3)	J-6026-130-B	
Grayscale chart (transparent, 16:9)	J-6394-080-A	
Pattern box PTB-500	J-6029-140-B	When using a transparent chart
Grayscale chart (reflective, 4:3)	—	Commercially available (Refer to Section 5-1-3 for details)
EX-464 extension board	J-6395-040-A	For extending plug-in board

Section 3
Setup Menu

3-1. Setup Menu

The Setup menu is used to select settings of camera operation, select items to be displayed on the viewfinder screen, and select the way the items are displayed.
It is also used for adjustment. The menu appears on the viewfinder screen.
By changing a setting through this menu, the same signal as output to the viewfinder is enabled to be output at the TEST OUT connector.

• Configuration of the Setup Menu

The setup menu consists of the following menus

- Operation menu
- Paint menu
- Maintenance menu
- Reference File menu
- Trimming File menu
- System config menu

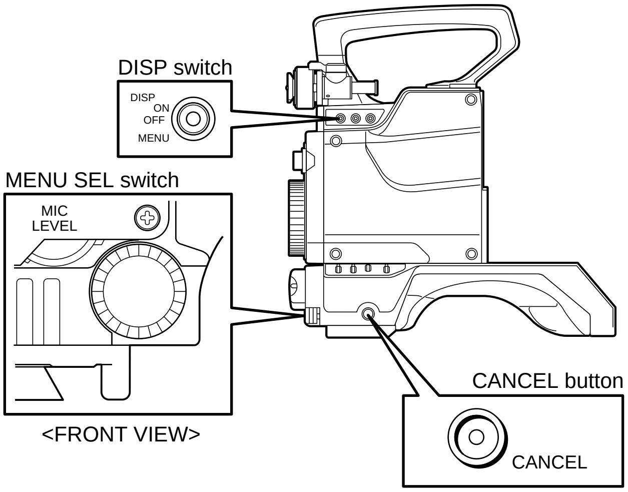
Operation and Paint menus are normally accessible. To display the other menus, switch setting of the AT-126 board is required. For details, refer to Section 1-5. "Function of Internal Switches/Control—AT-126 board"

• Equipment required

CCD Unit	OHB-450/550 series
Camera Adaptor	CA-530/550/570 series

Supply power from a camera control unit CCU-700A/700AP, AC adaptor AC-550/550CE or VTR.

• Switches and Button



DISP switch

ON : Displays characters and messages indicating the video camera settings and operation status.
OFF : No character or marker display appears on the viewfinder screen.
MENU : The setup menu appears on the viewfinder screen.

MENU SEL switch

Selects the menu item or setting value displayed on the viewfinder screen.

CANCEL button

Cancels the contents of a menu setting, or returns to the page select mode or TOP menu.

Note

The TOP menu screen indicates the entire configuration of menu items.
To display the TOP menu, set the DISP switch to MENU (from OFF) while holding down the MENU SEL switch.

- **Basic Operation**

1. Displaying the menu
   To display the Operation menu, set the DISP switch to MENU.
   To display the other menus than the Operation menu, first of all, the TOP menu shall be displayed.
   To display the TOP menu, set the DISP switch to MENU while holding down the MENU SEL switch. Then turn the MENU SEL switch to move the cursor to a menu item which you want and press the MENU SEL switch.
2. To shift the page, turn the MENU SEL switch with a page scroll bar displayed at the top-right of the screen until the desired page is displayed and press the MENU SEL switch.
   The menu enters the item select mode and the page scroll bar disappears.
3. To shift the item, turn the MENU SEL switch until the → cursor points the item to be set and press the MENU SEL switch.
4. To change the value, turn the MENU SEL switch. You can change the values quickly by turning the MENU SEL switch fast. You can make very fine adjustments by turning the switch slowly. By pressing the MENU SEL switch, the setting is entered.
5 The menu page is returned to the item select mode or page select mode every time the CANCEL button is pressed.
6. To exit from the setup menu, set the DISP switch to OFF.

- **ROM version**

Contents in the menu and factory settings may differ from the descriptions in this manual depending on the version of ROM (IC36) on the AT-126 board.
In this section, an item under “Ver.” in the table shows a ROM version. If any version is given, it shows that the function for the item is added or changed, and the ROM with that version or higher version supports the function. If no version is given, it shows that every ROM version supports the function.
To confirm the ROM version easily proceed as follows:

1. Set the DISP switch to OFF.
2. Power the unit on while holding down the MENU SEL switch. The indication of ROM version is displayed for about three seconds.

3-1-1. Operation Menu

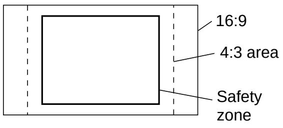
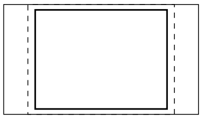
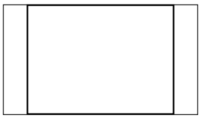
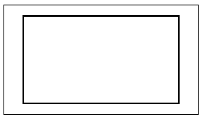
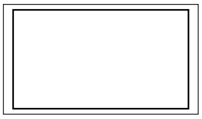
This menu contains items contained for changing camera settings to suit shooting conditions during normal camera operations.

(Boxed items under “Settings” indicate the factory setting.)

Page	Ver.	Item	Settings	Contents
VF Display		Zoom	$\boxed{\text{On}}$, Off	Turns on and off the indications of zoom position and lens extender.
		SHUTT	$\boxed{\text{On}}$, Off	Turns on and off the indications of shutter speed and mode.
		Iris	$\boxed{\text{On}}$, Off	Turns the iris setting indication on and off.
		Audio	$\boxed{\text{On}}$, Off	Turns the audio level indication on and off. (Automatically turned OFF in connection with CCU/RCP)
		Tape	$\boxed{\text{On}}$, Off	Turns the tape-remaining indication on and off. (Automatically turned OFF in connection with CCU/RCP)
		Zebra	On, Off	Turns the zebra indication on and off. (Corresponds to the Zebra switch of VF connected to the camera.)
		Message	$\boxed{\text{On}}$, Off	Turns on and off the indication of message in changing each setting of filter, white balance memory, gain value, DCC(auto knee) and shutter speed. The indication is displayed within three seconds in the center of the viewfinder screen.
		Mode	CHG, $\boxed{\text{USR}}$	CHG : The indications of the optical filter, white balance memory and gain value are displayed only when they differ from the standard settings (FILTER:1B, WHITE:A, GAIN:0dB) USR : The indications are displayed corresponding to the settings on the VF Display page.
		Filter	*, $\boxed{\text{On}}$, Off	Turns the optical filter indication on and off.
		White	*, $\boxed{\text{On}}$, Off	Turns the white balance memory indication on and off.
		Gain	*, $\boxed{\text{On}}$, Off	Turns the gain value indication on and off.
Marker		Center	$\boxed{\text{On}}$, Off	Turns the center marker indication on and off.
		Safety Zone	80%, $\boxed{\text{90\%}}$, Off	Turns the safety zone marker indication on and off and selects the area indicated by that marker. a)
		Box Cursor	On, $\boxed{\text{Off}}$	Turns the box cursor indication on and off.
		Box H POS	−99 to 99 ($\boxed{0}$)	Shifts horizontally the location of the box cursor on the screen.
		Box V POS	−99 to 99 ($\boxed{0}$)	Shifts vertically the location of the box cursor on the screen.
		Box WIDTH	00 to 99 ($\boxed{41}$)	Sets the width of the box cursor.
		Box Hight	00 to 99 ($\boxed{10}$)	Sets the height of the box cursor.

Page	Ver.	Item	Settings	Contents
Gain SW		Low	–3, $\boxed{0}$, 3, 6, 9, 12, 18, 24, 30 dB	Selects the gain value for each gain switch position. (Low, Middle, High)
		Middle	–3, 0, 3, 6, $\boxed{9}$, 12, 18, 24, 30 dB	
		High	–3, 0, 3, 6, 9, 12, $\boxed{18}$, 24, 30 dB	
Wide Screen (For OHB-455WS/550WS/T450WS series)		16:9/4:3 Mode	$\boxed{16:9}$, 4:3	Selects the aspect ratio for the video signal output. (This setting is valid only when the camera is used alone.) [b]
		VF Aspect	$\boxed{\text{Auto}}$, 4:3	Selects the aspect ratio for the viewfinder indication. Auto : Automatically selects according to the aspect ratio selected by 16:9/4:3 Mode on the Wide Screen page. 4:3 : Selects 4:3 regardless of the 16:9/4:3 MODE setting.
		4:3 Safety	On, $\boxed{\text{Off}}$	Selects whether the safety zone marker showing the 4:3 area is indicated in the 16:9 mode, or not. [a]
		16:9 ID On VF	On, $\boxed{\text{Off}}$	Turns on and off the 16:9 indication in the 16:9 mode on the viewfinder screen. (This setting is valid only when the DISP switch is set to ON or OFF.)
		16:9 ID On Bars	On, $\boxed{\text{Off}}$	Selects whether the 16:9 indication is displayed on the internal color-bar in the16:9 mode, or not. (This setting is valid only when the DISP switch is set to ON or OFF.)
MON Out		BNC Test Out	$\boxed{\text{CAM VBS}}$, RM VBS, VF Y	Selects a video signal to be output at TEST OUT connector. CAM VBS : Color composite signal RM VBS : The same as a signal ouput to RM-P9 Y : Y(monochrome) signal
		RM/MON CHAR	$\boxed{\text{On}}$, Off	Selects whether character signals displayed on the viewfinder screen are mixed with the VBS signal to be output to RM-P9, or not. Turning on is convenient to operate the setup menu by RM-P9.
		VBS Lock	On, $\boxed{\text{Off}}$	Used to prevent misoperation by ENC/RGB switch. On : ENC signal is output at TEST OUT connector regardless of ENC/RGB switch setting. Off : A signal selected by ENC/RGB switch is output.
		VF Video Mode	$\boxed{\text{Y}}$, MIX	Selects a video signal to be output to the viewfinder. Y : Y = 0.3R+0.59G+0.11B; The same as a camera output signal MIX : Y = 0.33R+0.33G+0.33B
		[RGB]-G	On, $\boxed{\text{Off}}$	Sets signals selectable by RGB switch. On : R-G, B-G Off : R, G, B

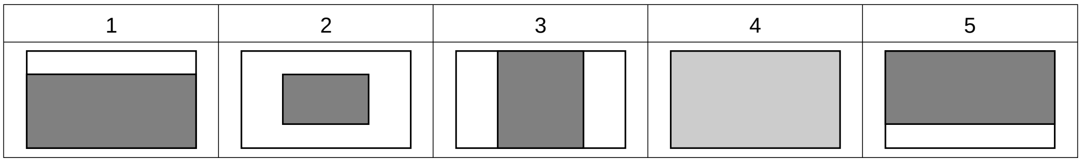
a) In the 16:9 mode, the following kinds of safety zone marker can be selected in combination of the settings of “Safety Zone” and “4:3 Safety”.

		Safety Zone		
		80%	90%	Off
4:3 Safety	On			
	Off			Not indicated

b) The change of aspect ratio using this menu is disabled because the CCU’ s setting has a priority when the CCU is connected. If you want to change the aspect ratio when the CCU is connected, use the Others page of the Paint menu. When you attempt to change using this menu, a message “Use Paint MNU” is displayed.

Page	Ver.	Item	Settings	Contents
Auto Iris Knee		Iris Override	−99 to 99 ($\boxed{0}$)	Sets the reference value for automatic iris adjustment. −99 (further closed) ↔ 99 (further opened)
		Iris Override	On, $\boxed{\text{Off}}$	Turns the auto-iris override function on and off.
		APL Ratio	−99 to 99 ($\boxed{0}$)	Sets the way the iris is automatically adjusted. −99 (PEAK) ↔ 99 (AVERAGE)
		DetMod	$\boxed{1}$, 2, 3, 4, 5,	Selects the auto-iris sensitivity pattern w) 1: Suppresses the sensitivity in the upper area of the picture 2: Suppresses the sensitivity in the surrounding area except the center of the picture 3: Suppresses the sensitivity at the left and right edges of the picture 4: The sensitivity uniform to the entire picture 5: Suppresses the sensitivity in the lower area of the picture
		SkinMod	$\boxed{\text{nor}}$, Skn	nor: Normal mode (Selectable from the above five patterns) Skn : Auto-iris adjustment is performed for an object which has specific color tones
		Skin phase	0 to 359 ($\boxed{\text{XX}}$)	Sets the color phase that is the center of the color area where the “Skn” mode function is to be activated when “Skn” is selected in the above DetMod item
		Skin Width	0 to 90 ($\boxed{\text{XX}}$)	Sets the width of the color area around the skin phase where the “Skn” mode function is to be activated when “Skn” is selected in the above DetMod item
		Skin Sat	−99 to 99 ($\boxed{\text{XX}}$)	Sets the saturation for which the “Skn” mode function is to be activated when “Skn” is selected in the above DetMod item
		Auto Hue	Press MENU SEL switch to execute	Sets the skin mode hue function automatically (If executed, each value for the above items Phase, Width and Sat is updated)
		Auto Knee Point	−99 to 99 ($\boxed{\text{XX}}$)	Sets the point on which the knee function starts to have effect in the auto-knee mode.
		Auto Knee Slope	−99 to 99 ($\boxed{\text{XX}}$)	Sets the volume of the effect of the knee function in the auto-knee mode.
Stand Alone		VF DTL	−99 to 99 ($\boxed{\text{XX}}$)	Adjusts the level for the VF detail
		VF DTL	$\boxed{\text{On}}$, Off	Turns the VF detail function on and off
		H Phase	−99 to 99 ($\boxed{\text{XX}}$)	Sets the horizontal phase of the camera in the genlock mode.
		SC Phase	0 to 360($\boxed{\text{XX}}$)	Sets the subcarrier phase of the camera in the genlock mode.
		Cable COMP	On, $\boxed{\text{Off}}$	Turns on and off the cable compensation circuit for the external sync signal in the genlock mode.
		SNG Bars	On, $\boxed{\text{Off}}$	Turns the color-bar signal for SNG on and off.
		Master Black	−99 to 99 ($\boxed{0}$)	Adjusts the Master Black level.
		Iris Override	On, $\boxed{\text{Off}}$	Turns the auto-iris override function on and off.
		CF Pulse	$\boxed{\text{On}}$, Off	Turns on and off the color framing pulse supplied to the VTR.
		Skin Detail	On, $\boxed{\text{Off}}$	Turns the skin tone detail function on and off.
		Auto Hue	Press MENU SEL switch to execute.	Sets the skin detail hue function automatically. (Locate the desired skin color within the gate marker of VF and measure.)

w)



Shaded pattern ▨ shows an area weighed in the auto-iris detection mode.

Page	Ver.	Item	Settings	Contents
Auto Setup		Auto Black	Press MENU SEL switch to execute.	Starts to automatically adjust the black balance. (To abort a processing during execution, press MENU SEL switch.)
		Auto White	Press MENU SEL switch to execute.	Starts to automatically adjust the white balance.
		Auto Level	Press MENU SEL switch to execute.	Starts to automatically adjust the level in the internal circuits. [c)] (To abort a processing during execution, press MENU SEL switch.)
		Test	1, 2, $\boxed{\text{Off}}$	Selects the test signal. 1 : Outputs the sawtooth waveform test signal 2 : Outputs 3-step waveform test signal Off : No test signal is output.
Diagnosis		(For details, refer to Section 3-2.)		
Camera ID		No	1 to 96 ($\boxed{\text{X}}$)	Sets a camera number in the range of 1 to 96. (When no camera number is set, "- -" is displayed.)
		ID: □□□□□□□		Sets a camera ID of up to ten alphanumerics, symbols, and spaces.
		No. / ID On Bars	CAM No., CAM ID, $\boxed{\text{Off}}$	Selects whether the camera number or ID is mixed with a camera output signal only in the color-bar mode, or not. (This setting is valid only when the DISP switch is set to ON or OFF.)
Lens File		Center H POS	−20 to 20 ($\boxed{\text{XX}}$)	Shifts horizontally the location of the center marker on the screen. 20 (right) ↔ −20 (left)
		Center V POS	−20 to 20 ($\boxed{\text{XX}}$)	Shifts vertically the location of the center marker on the screen. 20 (up) ↔ −20 (down)
		Center POS Store	Press MENU SEL switch to execute.	Stores the location of the center marker at present in the selected lens file number.
		No.	$\boxed{0}$ to 15	Selects a lens file. [d)] (Example) No. : 1 ← Lens file number (0 to15) Lens : 25 : A8.5 × 5.5 ← Lens name EX : 1.0 ← Lens extender value

c) When executing the Auto level, data set through the menu is all cleared and the automatic level adjustment is performed in sequence, After the adjustment is complete, adjustment result is stored as a master setup data.

1. A reference file which is reference for adjustment is loaded .
2. Lens is autmatically closed and the black balance is automatically adjusted.
3. The white balance is automatically adjust using Test 2 (3-step) signal.

Notes

This white balance adjustment compensates a drift of the gain of an amplifier, does not compensate color temperature for an actual object.

The gamma and knee compensation values do not change with a lapse of time because of the digital-processing camera.
Therefore, the gamma and knee compensation values remains the values stored in the reference file.

d) Select a lens file appropriate for the mounted lens from 16 kinds of the lens files which are stored in the RAM IC26/AT-126 board.
An additional data such as a center marker is also stored in the selected lens file.

3-1-2. Paint Menu

The Paint menu is used for white and other paint adjustments items. To activate the Paint menu, first display the TOP menu.

(Boxed items under “Settings” indicate the factory setting.)

Page	Ver.	Item	Settings	Contents
Video Level		White R/G/B	–99 to 99 ($\boxed{0}$)	Adjusts the R, G, B gain level.
		Black R/G/B/M	–99 to 99 ($\boxed{0}$)	Adjusts the R, G, B master black level.
		Flare R/G/B	–99 to 99 ($\boxed{0}$)	Adjusts the R, G, B flare level.
		Gamma R/G/B/M	–99 to 99 ($\boxed{0}$)	Adjusts the R, G, B master gamma correction curve.
		BlkGam R/G/B/M	–99 to 99 ($\boxed{0}$)	Adjusts the R,G,B and master black gamma to adjust the rising block of the gamma correction curve
		Flare	$\boxed{\text{On}}$, Off	Turns the flare correction circuit on and off.
		Test	1, 2, $\boxed{\text{Off}}$	Selects the test signal. 1 : Outputs the sawtooth waveform test signal 2 : Outputs 3-step waveform test signal Off : No test signal is output
		Clear	Press MENU SEL switch to execute.	Sets all settings on the Video Level page to 0. (When you press MENU SEL switch, the “Clear” indication flashes. Press MENU SEL switch again to execute; press CANCEL button to cancel.)
Detail 1		Detail	$\boxed{\text{On}}$, Off	Turns the function on and off to improve resolution by adding the detail signal.
		Level	–99 to 99 ($\boxed{0}$)	Adjusts the master level for the detail signal.
		Limitter	–99 to 99 ($\boxed{0}$)	Adjusts the clipping level against the maximum detail level.
		Crispening	–99 to 99 ($\boxed{0}$)	Adjusts the level at which the detail signal is crispened.
		Level DEP.	–99 to 99 ($\boxed{0}$)	Adjusts the level to control the detail signal used at lower signal level.
		Level DEP.	$\boxed{\text{On}}$, Off	Turns the level depend function on and off.
		FineDetail	–99 to 99 ($\boxed{0}$)	Adjusts the fine detail waveform in thickness
		FineDetail	$\boxed{\text{On}}$, Off	Turns the fine detail function on and off
		Test	1, 2, $\boxed{\text{Off}}$	Selects the test signal. 1 : Outputs the sawtooth waveform test signal 2 : Outputs 3-step waveform test signal Off : No test signal is output
		Clear	Press MENU SEL switch to execute.	Sets all settings on the Detail 1 page to 0. (When you press MENU SEL switch, the “Clear” indication flashes. Press MENU SEL switch again to execute; press CANCEL button to cancel.)

Page	Ver.	Item	Settings	Contents
Detail 2		Detail	$\boxed{\text{On}}$, Off	Turns the function on and off to improve resolution by adding detail signal.
		H/V Ratio	–99 to 99 ($\boxed{0}$)	Adjusts the mix ratio of H and V detail signal.
		Frequency	–99 to 99 ($\boxed{0}$)	Adjusts the boost frequency for H detail signal.
		MIX Ratio	–99 to 99 ($\boxed{0}$)	Adjusts the mix ratio of H detail signal used before and after the gamma compensation circuit.
		W.Limitter	–99 to 99 ($\boxed{0}$)	Adjust the clipping level adainst the higher detail signal at the maximum level.
		B.Limitter	–99 to 99 ($\boxed{0}$)	Adjusts the clippping level against the lower detail signal at the minimum level.
		Comb	–99 to 99 ($\boxed{0}$)	Sets the effect volume of the comb filter 99 (Causes less cross colors.) ↔ –99 (Yields clear pictures, but causes more cross colors.) * For a PAL model, this function has the effect on not every object but a specified object.
		Knee APT.	On, $\boxed{\text{Off}}$	Turns the knee aperture function on and off
		Knee APT.	−99 to 99 ($\boxed{0}$)	Adjusts the detail level for signals which exceeds the knee point to emphasize the detail of the highlight
		Test	1, 2, $\boxed{\text{Off}}$	Selects the test signal. 1 : Outputs the sawtooth waveform test signal 2 : Outputs 3-step waveform test signal Off : No test signal is output
		Clear	Press MENU SEL switch to execute.	Sets all settings on the Detail 2 page to 0. (When you press MENU SEL switch, the “Clear” indication flashes. Press MENU SEL switch again to execute; press CANCEL button to cancel.)
Skin Detail		Master SW	On, $\boxed{\text{Off}}$	Turns the skin tone detail function on and off **Note** When set to On, the setting of SkinDTL for No. 1 shown below is always On
		SkinDTL	1 : On 2 : On, $\boxed{\text{Off}}$ 3 : On, $\boxed{\text{Off}}$	Turns the skin tone detail function on and off for each selection 1 to 3 of Gate.
		Level	1 : −99 to 99 ($\boxed{0}$) 2 : −99 to 99 ($\boxed{0}$) 3 : −99 to 99 ($\boxed{0}$)	Adjusts the skin tone detail for each selection 1 to 3 of Gate item.
		Phase	1 : 0 to 359 ($\boxed{120}$) 2 : 0 to 359 ($\boxed{120}$) 3 : 0 to 359 ($\boxed{120}$)	Sets the color phase that is the center of the color area where the skin tone detail function is to be activated for each selection 1 to 3 of Gate item.
		Width	1 : 0 to 90 ($\boxed{0}$) 2 : 0 to 90 ($\boxed{0}$) 3 : 0 to 90 ($\boxed{0}$)	Sets the width of the color area around the phase where the skin tone detail function is to be activated for each selection 1 to 3 of Gate item.
		Sat	1 : −99 to 99 ($\boxed{0}$) 2 : −99 to 99 ($\boxed{0}$) 3 : −99 to 99 ($\boxed{0}$)	Sets the saturation for which the skin tone detail function is to be activated for each selection 1 to 3 of Gate item.
		Gate	$\boxed{1}$, 2, 3, irs	1, 2, 3 : Selects the gate marker showing the area where the skin tone detail function is activated irs : Indicates the auto-iris detection area when the unit is put into the “Skn” mode by using the Operation menu, Auto Iris/Knee page
		Gate Vf	On, $\boxed{\text{Off}}$	Turns on and off the gate marker indication selected by the above Gate item
		Auto Hue	Press MENU SEL switch to execute.	Sets the skin tone detail hue function automatically
		Clear	Press MENU SEL switch to execute.	Sets all settings on the Skin Detail page to 0. (When you press MENU SEL switch, the “Clear” indication flashes. Press MENU SEL switch again to execute; press CANCEL button to cancel.)

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Page	Ver.	Item	Settings	Contents
Gamma		Gamma, R/G/B/M	−99 to 99 ($\boxed{0}$)	Adjusts the R, G, B and master gamma level.
		Coarse	0.35, 0.40, $\boxed{0.45}$, 0.50, 0.55	Selects the gamma value in steps.
		Gamma	$\boxed{\text{On}}$, Off	Turns the gamma value on and off.
		BlkGam R/G/B/M	−99 to 99 ($\boxed{0}$)	Adjusts the R,G,B and master black gamma to adjust the rising block of the gamma correction curve
		BlkGam	On, $\boxed{\text{Off}}$	Turns the black gamma function on and off.
		Test	1, 2, $\boxed{\text{Off}}$	Selects the test signal. 1 : Outputs the sawtooth waveform test signal 2 : Outputs 3-step waveform test signal Off : No test signal is output
		Clear	Press MENU SEL switch to execute.	Resets all settings on the Gamma page to the factry settings. (When you press MENU SEL switch, the “Clear” indication flashes. Press MENU SEL switch again to execute; press CANCEL button to cancel.)
W.Clip/Knee		W. Clip R/G/B/M	−99 to 99 ($\boxed{0}$)	Adjusts the R,G,B and master white clip levels
		W. Clip. On/Off	$\boxed{\text{On}}$, Off	Turns the white clip function on and off
		Point R/G/B/M	−99 to 99 ($\boxed{0}$)	Adjusts the R, G, B and master knee point levels when the auto knee function is Off
		Slope R/G/B/M	−99 to 99 ($\boxed{0}$)	Adjusts the R, G, B and master knee slope levels when the auto knee function is Off
		Knee	$\boxed{\text{On}}$, Off	Turn the knee function on and off
		A. Knee	On, $\boxed{\text{Off}}$	Turns the auto knee function on and off
		mode	$\boxed{\text{nor}}$, adp	Selects the auto knee mode nor: Normal mode Automatically adjusts the knee point and knee slope to obtain the optimum peak level for the highlight content of a picture adp: Adaptive mode Detects an object which is occupying the largest area of a picture and automatically adjusts the knee point and knee slope to obtain the optimum level for the object
		KneSat. (Point)	−99 to 99 ($\boxed{0}$)	Sets the video level point where the knee saturation function starts to be activated
		Kne Sat	$\boxed{\text{On}}$, Off	Turns the knee saturation function on and off
		Knee MAX	On, $\boxed{\text{Off}}$	Turns on and off the knee max function which changes the slope to completely collapsed form
		Test	1, 2, $\boxed{\text{Off}}$	Selects the test signal. 1 : Outputs the sawtooth waveform test signal 2 : Outputs 3-step waveform test signal Off : No test signal is output
		Clear	Press MENU SEL switch to execute.	Sets all settings on the W.Clip/Knee page to 0. (When you press MENU SEL switch, the “Clear” indication flashes. Press MENU SEL switch again to execute; press CANCEL button to cancel.).

Page	Ver.	Item	Settings	Contents
Matrix		G-R, B-R	–99 to 99 ($\boxed{0}$)	Compensates the user's matrix (sets an optional value as the constant for G-R, B-R, R-G, B-G, R-B, and G-B).
		R-G, B-G	–99 to 99 ($\boxed{0}$)	
		R-B, G-B	–99 to 99 ($\boxed{0}$)	
		Matrix	$\boxed{\text{On}}$, Off	Turns the matrix compensation on and off.
		User[e]	$\boxed{\text{On}}$, Off	Turns the user's matrix compensation on and off
		Preset[e]	$\boxed{\text{On}}$, Off	Turns on and off only the preset matrix compensation (fixed constant compensation)
		Mult. MTX[e]	On, $\boxed{\text{Off}}$	Turns on and off the multi matrix by which an optional value as the constant can be set for each area of 16-part divided color tones
		Area No.[f]	$\boxed{1}$ to 16	Selects the one of 16-part divided color tones
		Hue	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the hue for the area selected by the above Area No. item
		Sat	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the saturation for the area selected by the above Area No. item
		Test	1, 2, $\boxed{\text{Off}}$	Selects the test signal. 1 : Outputs the sawtooth waveform test signal 2 : Outputs 3-step form test signal Off : No test signal is output
		Clear	Press MENU SEL switch to execute.	Sets all settings on the Matrix page to 0. (When you press MENU SEL switch, the "Clear" indication flashes. Press MENU SEL switch again to execute; press CANCEL button to cancel.)
Scene File		1	Storing and recalling a scene file (painting data corresponding to a shot scene) **Storing a scene file** 1 Turn MENU SEL switch to move the → cursor to "File Store," then press MENU SEL switch. "File Store" flashes on the viewfinder screen. 2 Select the file number (1 to 5) to be stored to. (If data is already stored at the selected location, the new data replaces the current data.) **Recalling a scene file** Turn MENU SEL switch to move the → cursor to the file number whose data is to be recalled, then press MENU SEL switch. • When MENU SEL switch is pressed, the scene file data replaces the current settings. • When the scene file is recalled, an asterisk appears next to the number.	
		2		
		3		
		4		
		5		
		File Store		
		Standard	Returns the current amount of paint adjustments and switch setting to their reference value stored as a reference file.	
Shutter		Shutter	On, $\boxed{\text{Off}}$	Turns the shutter on and off.[u]
		Shutter	$\frac{1}{100}$ (or $\frac{1}{60}$), $\frac{1}{125}$, $\frac{1}{250}$, $\frac{1}{500}$, $\frac{1}{1000}$, $\frac{1}{2000}$	Selects the shutter speed.
		ECS	On, $\boxed{\text{Off}}$	Turns the ECS mode on and off.[u]
		ECS	[h]	Sets the ECS (CLS) frequency.
		S-EVS	On, $\boxed{\text{Off}}$	Turns the S-EVS mode on and off.[u]
		S-EVS	$\boxed{0}$ to 100%	Sets the desired resolution in %. (This setting is invalid with the OHB-450/450P/451/451P installed.)
Others		16:9/4:3 Mode	$\boxed{\text{16:9}}$, 4:3	Selects the aspect ratio for the video signal output.[i]

[e] When the User, Preset and Multi.MTX are all set to ON, the value of their sum as the matrix constant is sent to the matrix circuit.

[f] When the both User and Preset are set to ON, the value of their sum is given for all the areas of 16-part divided color tunes as equal coefficient.

[h] Variable range differs depending on the OHB in use. For details refer to the operation manual supplied with the OHB.

[i] The aspect ratio normally corresponds to the CCU's setting when the CCU is connected. To forcibly select, use this menu.

[u] If the shutter mode selection is made both by the SHUTTER switch in the camera front and from the setup menu, last-set item is selected.
If the Shutter and ECS are both set to ON in the menu, the ECS mode is automatically selected. And if the ECS and S-EVS are both set to ON, the S-EVS mode is.

3-1-3. Maintenance Menu

The Maintenance menu is used for encoder output level and other adjustments items necessary for camera’s maintenance. The Maintenance menu is not normally accessible. To display this menu, switch setting of the AT-126 board is required. For details, refer to Section 1-5. “Function of Internal Switches/ Control—AT-126 board”
To activate the Maintenance menu, first display the TOP menu.

(Boxed items under “Settings” indicate the factory setting.)

Page	Ver.	Item	Settings	Contents
VBS		SYNC Level	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the sync level of camera’s encoder output signal.
		Y Level	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the Y level of camera’s encoder output signal.
		Burst Level	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the burst level of camera’s encoder output signal.
		Chroma Level	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the chroma level of camera’s encoder output signal.
		Q/V Level	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the Q (or V) level of camera’s encoder output signal.
		Setup Level	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the sync level of camera’s encoder output signal. (This setting is valid only for NTSC.)
		BF Phase	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the burst phase of camera’s encoder output signal.
		SC-H Phase	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the SC-H phase of camera’s encoder output signal.
		V Blanking	19, $\boxed{20}$, 21H	Adjusts the V blanking width of camera’s encoder output signal. (This setting is valid only for NTSC.) In connection with CCU, the width is fixed to 19H. * For a PAL model, the width is fixed to 25H at all times.
White Shading		V Saw R/G/B	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the volume of V.Saw compensation for the R, G, or B white shading.
		V Para R/G/B	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the volume of V.Para compensation for the R, G, or B white shading.
		H Saw R/G/B	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the volume of H.Saw compensation for the R, G, or B white shading.
		H Para R/G/B	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the volume of H.Para compensation for the R, G, or B white shading.
		White R/G/B	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the R, G, or B white level.
		V MOD R/G/B/M	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the volume of V.Saw compensation for the R, G, B or master modulation shading of the lens and prism.[j]
		V MOD	On, $\boxed{\text{Off}}$	Turns the V modulation shading on and off.
		Auto White	Press MENU SEL switch to execute.	Starts to automatically adjust the white balance.
		Clear	Press MENU SEL switch to execute.	Resets numeric settings to “0” on the White Shading page. (When you press the MENU SEL switch, the “Clear” indication flashes. Press the MENU SEL switch again to execute; press CANCEL button to cancel.)

j) When the master modulation shading is adjusted, the V. Saw component for the R and B V-modulation shadings of the prism is simultaneously compensated.

Page	Ver.	Item	Settings	Contents
Black Shading		V Saw R/G/B	–99 to 99 (XX)	Adjusts the volume of V.Saw compensation for the R, G, or B black shading.
		H Saw R/G/B	–99 to 99 (XX)	Adjusts the volume of H.Saw compensation for the R, G, or B black shading.
		BLK Set R/G/B	–99 to 99 (XX)	Adjusts the volume of black set compensation for the R, G, or B. (Adjusts for each gain.)
		Black R/G/B/M	–99 to 99 (XX)	Adjusts the R, G, B or master black level.
		Master Gain	-3,0,3,6,9,12,18, 24,30 dB (X)	Selects the master gain value.
		Auto Black	Press MENU SEL switch to execute.	Starts to automatically adjust the black balance.
		Clear	Press MENU SEL switch to execute.	Resets numeric settings to “0” on the Black Shading page. (When you press the MENU SEL switch, the “Clear” indication flashes. Press the MENU SEL switch again to execute; press CANCEL button to cancel.)
Auto Setup		Auto White	Press MENU SEL switch to execute.	Starts to automatically adjust the white balance.
		Auto Black	Press MENU SEL switch to execute.	Starts to automatically adjust the black balance. (To abort a processing during execution, press MENU SEL switch.)
		Level Auto	Press MENU SEL switch to execute.	Starts to automatically adjust the level in the internal circuits. c) (To abort a processing during execution, press MENU SEL switch.)
		Auto Hue	Press MENU SEL switch to execute.	Sets the skin detail hue function automatically. (Locate the desired skin color within the gate marker of VF and measure.)
		White Shading	Press MENU SEL switch to execute.	Starts to automatically adjust the white shading. (To abort a processing during execution, press MENU SEL switch.)
		Black Shading	Press MENU SEL switch to execute.	Starts to automatically adjust the black shading. k) (To abort a processing during execution, press MENU SEL switch.)
		Color REF (SELF)	Press MENU SEL switch to execute.	(Does not function in the unit.) Makes a color reference to compensate the difference in colors between OHBs using a single camera. (Locate the desired colors of a Macbeth chart within the gate marker of VF and measure. To abort a processing uring execution, press MENU SEL switch.) m)
		Color Setup (SELF)	Press MENU SEL switch to execute.	(Does not function in the unit.) Automatically calculates the color matrix from the reference. (Locate the desired colors of a Macbeth chart within the gate marker of VF and measure. To abort a processing during execution, press MENU SEL switch.) n)

c) When executing the Level Auto, data set through the menu is all cleared and the automatic level adjustment is performed in sequence, After the adjustment is complete, adjustment result is stored as a master setup data.

1. A reference file which is reference for adjustment is loaded .
2. Lens is autmatically closed and the black balance is automatically adjusted.
3. The white balance is automatically adjust using Test 2 (3-step) signal.

Notes

This white balance adjustment compensates a drift of the gain of an amplifier, does not compensate color temperature for an actual object.

The gamma and knee compensation values do not change with a lapse of time because of the digital-processing camera. Therefore, the gamma and knee compensation values remains the values stored in the reference file.

k) Before first using the camera with the OHB-450/451/550/550WS/T450WS (or their PAL version) installed, or After replacing the CCD unit, be sure to execute the automatic black shading adjustment.

m) When performing compensation between two or more cameras, use the MSU.

n) Differing from the color-setup operation by plural cameras, a data transfer is not performed.
Execute to recalculate. After execution, the color matrix data is temporarily reflected in the OHB matrix of the System config menu.
Execute the OHB File Store of the Trimming File menu to store the color matrix data.

Page	Ver.	Item	Settings	Contents
Date/Time		DD/MM/YY HH:MM:SS		Adjusts a built-in timer. (HH;hour/MM;minute only)
		Date on Bars	On, $\boxed{\text{Off}}$	Selects whether the date characters are mixed with a camera output signal in the color-bar mode, or not. (This setting is valid only when the DISP switch is set to ON or OFF.)
		Time on Bars	On, $\boxed{\text{Off}}$	Selects whether the time characters are mixed with a camera output signal in the color-bar mode, or not. (This setting is valid only when the DISP switch is set to ON or OFF.)
Others		S/N Measure	On, $\boxed{\text{Off}}$	On : Set to On in mesuring the S/N ratio. And settings of the Detail, Chroma, Gamma, Matrix, and Flare will be temporarily turned Off. Off : Settings of Detail, Chroma and so on are returned as they were.
		MOD Measure	On, $\boxed{\text{Off}}$	On : Set to On in mesuring the modulation depth. And settings of the Detail, Gamma, Matrix, and Flare will be temporarily turned Off. Off : Settings of Detail, Gamma and so on are returned as they were.
		Master Black	−99 to 99 ($\boxed{0}$)	Adjusts the master black in measuring the S/N ratio and modulation depth.
		Detail	$\boxed{\text{On}}$, Off	
		Chroma	$\boxed{\text{On}}$, Off	
		Gamma	$\boxed{\text{On}}$, Off	
		Matrix	$\boxed{\text{On}}$, Off	
		Flare	$\boxed{\text{On}}$, Off	

3-1-4. Reference File Menu

The Reference File menu stores the reference values used for automatic setup adjustment and the standard settings of the switches as the reference files. And the menu can clear the current reference files.
The Reference File menu is not normally accessible. To display this menu, switch setting of the AT-126 board is required. For details, refer to Section 1-5. “Function of Internal Switches/Control—AT-126 board”
To activate the Reference File menu, first display the TOP menu.

Notes

1. Executing the File Store on the Reference File page registers settings of items, which have been set through the Paint, Maintenance and System config menus just before the file store, as the reference values.
2. When changed numbers of items are returned to the reference values stored as the reference files, recall the standard file using an MSU/RCP or the setup menu.

Page	Ver.	Item	Settings	Contents
Reference File		File Store	Press MENU SEL switch twice to execute.	Stores the adjustment value on each item as the reference value.
		Clear File	Press MENU SEL switch to execute.	Clears the adjustment values stored as the reference files. (Temporarily clears the current reference files [p].)

[p] If the power is turned off without execution of the File Store after clearing the file, the original setting is restored.

3-1-5. Trimming File Menu

The Trimming File menu stores the adjustment data in replacing parts as the trimming files. And the menu can clear the current adjustment values. The Trimming File menu is not normally accessible.
To display this menu, switch setting of the AT-126 board is required. For details, refer to Section 1-5. “Function of Internal Switches/Control—AT-126 board”
To activate the Trimming File menu, first display the TOP menu.

Note

Executing the File Store on the Trimming File page registers settings of items, which have been set through the Maintenance and System config menus just before the file store, as the reference values.

Page	Ver.	Item	Settings	Contents
Trimming File		File Store	Press MENU SEL switch twice to execute.	Stores the adjustment value on each item as the reference value.
		Clear File	Press MENU SEL switch to execute.	Clears the adjustment values stored as the triming files. (Temporarily clears the current triming files [p].)
OHB File		File Store	Press MENU SEL switch twice to execute.	Stores specific data for a CCD unit to be used as the OHB files. The standard values are stored at the factory. (Stores the offset value, OHB matrix data and so on.)
Lens File		Lens File Store	Press MENU SEL switch to execute.	Stores specific data for a lens to be used as the lens files. The standard values are stored at the factory.
		Select Current Lens	$\boxed{0}$ to 49	Loads a lens data into the lens file selected at present by the Lens File page of the Operation menu.
		Reset All Lens	Press MENU SEL switch to execute.	Resets all of 16 lens files. (Example) No. : 1 ← Lens stored number (0 to 49) Lens : 25 : A8.5 × 5.5 ← Lens name EX : 1.0 ← Lens extender value

[p] If the power is turned off without execution of the File Store after clearing the file, the original setting is restored.

3-1-6. System Config Menu

The System config menu is used for adjustments items necessary to replace a printed circuit board or some parts of the camera. The System config menu is not normally accessible. To display this menu, switch setting of the AT-126 board is required. For details, refer to Section 1-5. “Function of Internal Switches/Control—AT-126 board”
To activate the System config menu, first display the TOP menu.

(Boxed items under “Settings” indicate the factory setting. XX or XXX represents two or three digits in hexadecimal.)

Page	Ver.	Item	Settings	Contents
Date/Time		YY/MM/DD HH:MM:SS		Adjusts the built-in calender and timer.
		Reset	Turn MENU SEL switch to execute.	Resets hour (HH), minute (MM) and second (SS) of the timer.
Y/Chroma		SC FREQ.	XXX ($\boxed{\text{XX}}$)	Adjusts the camera’s subcarrier frequency.
		Y SYNC	XXX ($\boxed{\text{XX}}$)	Adjusts the sync level of camera’s Y output signal.
		Y Setup	XXX ($\boxed{\text{XX}}$)	Adjusts the setup level of camera’s Y output signal.
		Y Video	XXX ($\boxed{\text{XX}}$)	Adjusts the Y level of camera’s Y output signal.
		Test Setup	XXX ($\boxed{\text{XX}}$)	Adjusts the setup level of camera’s encoder output signal.
		Burst LVL	XXX ($\boxed{\text{XX}}$)	Adjusts the burst level of camera’s encoder output signal.
		Chroma LVL	XXX ($\boxed{\text{XX}}$)	Adjusts the chroma level of camera’s encoder output signal.
		Q/V LVL	XXX ($\boxed{\text{XX}}$)	Adjusts the Q(V) level of camera’s encoder output signal.
		SC-H Phase	XXX ($\boxed{\text{XX}}$)	Adjusts the SC-H phase of camera’s encoder output signal.
		REG LVL	XXX ($\boxed{\text{XX}}$)	Sets the level of the R, G and B output signals (Video and SYNC levels vary together)
		VF	XXX ($\boxed{\text{XX}}$)	Sets the level of the R, G and B output signals (Only the video level varies)
		CB	On, $\boxed{\text{Off}}$	Turns on and off the camera color-bar signal to be output in setting each item on the Y/Chroma page.
PR/VA/Test		VA MOD R/G/B	XXX ($\boxed{\text{XX}}$)	Adjusts the R, G or B modulation balance for the VA board.
		G Clock	XXX ($\boxed{\text{XX}}$)	Adjusts the clock pulse in phase to be input to the AD converter for G signal on the PR board. (Note: When replacing OHB, readjustment is required to set the maximum value of the modulation depth.)
		R/B Clock	XXX ($\boxed{\text{XX}}$)	Adjusts the clock pulse in phase to be input to the AD converter for R/B signals on the PR board. (Note: When replacing OHB, readjustment is required to set the minimum level of a pseudo signal.)
		M.Black	XXX ($\boxed{\text{XX}}$)	Adjusts the master black signal.
		Test 2 HI	XXX ($\boxed{\text{XX}}$)	Adjusts the high level of the Test 2 (3-STEP) signal on the VA board.
		Test 2 MID	XXX ($\boxed{\text{XX}}$)	Adjusts the middle level of the Test 2 (3-STEP) signal on the VA board.
		Test Clip	XXX ($\boxed{\text{XX}}$)	Adjusts the clip level of the Test 1 (sawtooth) signal on the VA board.
		Test	1, 2, $\boxed{\text{Off}}$	Selects a test signal to be output in setting each item on the PR/VR/ Test page. 1 : Outputs the sawtooth test signal 2 : Outputs the 3-step waveform test signal Off : No test signal is output

Page	Ver.	Item	Settings	Contents
PreKnee/ Zebra		PreKnee1 R/G/B	XXX (XX)	Adjusts the R, G or B pre-knee 1 level on the VA board.
		Aperture	XXX (XX)	Adjusts the aperture compensation signal level. y)
		White Clip	XXX (XX)	Adjusts the white clip level.
		White Clip	On, Off	Turns the white clip function on and off.
		Zebra 1 LEVEL, RANGE	XXX (XX)	Sets the center value and range for the zebra 1 signal detection.
		Zebra 2 LEVEL	XXX (XX)	Sets the detection value for the zebra 2 signal.
		Z.DISP	1,2, 1&2	Selects a zebra signal to be displayed on the viewfinder. 1 : Zebra 1 signal 2 : Zebra 2 signal 1&2 : Both zebra 1 and 2 signals are displayed at the same time.
		Test	1, 2, Off	Selects a test signal to be output in setting each item on the PreKnee/Zebra page. 1 : Outputs the sawtooth test signal 2 : Outputs the 3-step waveform test signal Off : No test signal is output
VTR/CCU		VTR R-Y	XXX (XX)	Adjusts the R-Y color-difference signal level.
		VTR B-Y	XXX (XX)	Adjusts the B-Y color-difference signal level.
		CCU Y SAMP	XXX (XX)	Adjusts the level of the sample pulse to be mixed with the Y signal.
		CCU R-Y SYNC	XXX (XX)	Adjusts the level of the sync pulse to be mixed with the R-Y signal.
		CCU B-Y SAMP	XXX (XX)	Adjusts the level of the sample pulse to be mixed with the B-Y signal.
		RGB Offset	XXX (XX)	Adjusts the G signal level.
		Test	1, 2, Off	Selects a test signal to be output in setting each item on the VTR/CCU page. 1 : Outputs the sawtooth test signal 2 : Outputs the 3-step waveform test signal Off : No test signal is output
		CB	On, Off	Turns on and off the camera color-bar signal to be output when setting each item on the VTR/CCU page.
IRIS		Level	XXX (XX)	Adjusts the auto-iris level.
		APL Ratio	XXX (XX)	Sets the way the iris is automatically adjusted. −99 (PEAK) ↔ 99 (AVERAGE)
		(Filter Set) 1 or A 2 or B 3 or C 4 or D	3200 K, 4300 K, 5600 K, 6300 K x)	Set when the color-temperature filter is assigned according to a user's requirement **Note** The filter indication on the VF screen can not display correctly the selected filter type if this item is improperly set
		Filter Disk	AUTO, 1, 2	Set corresponding to the filter disc type built in the OHB After setting, excute the Refernce File Store of the Reference File menu without fail AUTO: Automatically recognizes the type of built-in filter 1: Recognizes the one filter is built in 2: Recognizes the two filters are built in

x) Factory setting is as follows:

	OHB-450/450P/451/451P/T450WS/T450WSP (One filter built-in)	**OHB-455WS/455WSP/550/550P/550WS/550WSP BVP-570WSPK (Two filters built-in)**
1 or A	3200 K	3200 K
2 or B	5600 K	3200 K
3 or C	5600 K	4300 K
4 or D	5600 K	6300 K

y) The adjustment value is cleared by turning off and on the power sequentially because it is the temporary setting value for adjustment.

Page	Ver.	Item	Settings	Contents
Color Setup		Color REF (SELF)	Press MENU SEL switch to execute.	(Does not function in the unit.) Makes a color reference to compensate the difference in colors between OHBs using a single camera. (Locate the desired colors of a Macbeth chart within the gate marker of VF and measure. To abort a processing during execution, press MENU SEL switch.) m)
		Color Setup (SELF)	Press MENU SEL switch to execute.	(Does not function in the unit.) Automatically calculates the color matrix from the reference. (Locate the desired colors of a Macbeth chart within the gate marker of VF and measure. To abort a processing during execution, press MENU SEL switch.) n)
		(OHB MTX) G-R, B-R R-G, B-G R-B, G-B	 –99 to 99 ($\boxed{0}$) –99 to 99 ($\boxed{0}$) –99 to 99 ($\boxed{0}$)	Compensates the OHB matrix to adjust the difference between OHBs or cameras (sets an optional value as the constant for G-R, B-R, R-G, B-G, R-B and G-B). r)
		OHB MTX	$\boxed{\text{On}}$, Off	Turns the OHB matrix compensation on and off.
		(Mult. OHB MTX) Area No.	 $\boxed{1}$ to 16 (X)	Selects the area when the OHB matrix is set for each area of 16-part divided color tones
		Hue	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the hue for the area selected by the above Area No. item
		Sat	–99 to 99 ($\boxed{\text{XX}}$)	Adjusts the saturation for the area selected by the above Area No. item

m) When performing compensation between two or more cameras, use the MSU.

n) Differing from the color-setup operation by plural cameras, a data transfer is not performed.
Execute to recalculate. After execution, the color matrix data is temporarily reflected in the OHB matrix of the System config menu.
Execute the OHB File Store of the Trimming File menu to store the color matrix data.

r) Adjust with the Matrix of the Paint menu turned OFF. Execute the OHB File Store of the Trimming File menu to store the adjustment values.

Page	Ver.	Item	Settings	Contents
Others1		Filter, WHT MEM	$\boxed{\text{On}}$, Off	On : A total of 8 settings of the white balance value can be saved in conbination with the CC filter and WHITE BAL switch settings. Off : One white balance value can be saved for the WHITE BAL switch setting A or B, for a total of 2 settings.
		NTSC ENC	$\boxed{\text{Wide}}$, Narrow	Sets the band width of the Q signal for the NTSC color encoder.
		Rotation	$\boxed{\text{STD}}$, RVS	Selects the mode of MENU SEL switch (as turned counterclockwise when viewed from the front.) STD : Cursor moves downwards and a numeric value increases. RVS : Cursor moves upwards and a numeric value decreases.
		Own Call	R, $\boxed{\text{F\&R}}$, Off	Selects whether one or two TALLY lamps are lit corresponding to the CALL button of camera adaptor pressed, or not. Or selects which TALLY lamp is lit when the CALL button is pressed. (This setting is valid in connection with CCU. When the camera is used alone and MSU/RCP is not connected to the camera, it is always set to OFF.) R : Rear TALLY lamp is lit. F&R : Rear and front TALLY lamps are lit. Off : No TALLY lamp is lit corresponding to the CALL button.
		Center MKR H	−20 to 20 ($\boxed{\text{XX}}$)	Shifts horizontally the location of the center marker on the screen. 20 (right) ↔ −20 (left)
		Center MKR V	−20 to 20 ($\boxed{\text{XX}}$)	Shifts vertically the location of the center marker on the screen. 20 (up) ↔ −20 (down)
		Lens VTR S/S	Talk, $\boxed{\text{RET2}}$	Selects the mode of VTR S/S SW of the lens and camera. Talk : VTR S/S SW of lens functions as INCOM TALK SW (momentary) and that of the camra as RET2 SW. RET2 : VTR S/S SW of lens functions as RET2 SW and that of the camera as INCOM TALK SW.
		VF ? Display	$\boxed{\text{On}}$, Off	Turns on and off the indication of ? mark at the top-right of the VF with the DISP switch set to ON when the self-diagnosis result is NG (no good) and so on.
		PinP RET RVS	$\boxed{\text{RVS1}}$, RVS 2, Off	Selects the indication mode of VF display in PinP mode. (Does not function in the unit.)

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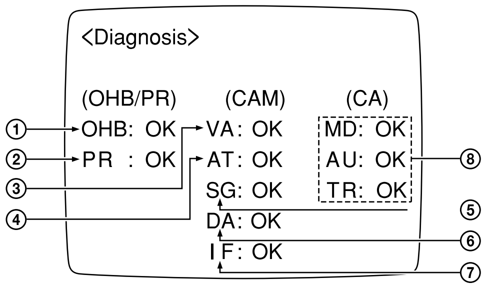
Page	Ver.	Item	Settings	Contents
Others2		F Tally RVS	$\boxed{\text{On}}$, Off	Selects the operation mode of TALLY lamps corresponding to a CALL button of MSU or RCP pressed when a TALLY signal is input to the camera from CCU or VTR. On : Rear and front TALLY lamps go out. Off : Rear TALLY lamp alone goes out.
		CHAR CAM No.	$\boxed{\text{1,2,3}}$, A,B,C	Selects the indication mode of the camera number set by the CAMERA ID. page of Operation menu. 1, 2, 3 : Indicates in numerics. A, B, C: Indicates camera numbers 1 to 27 in alphabetical order of A to Z. (When connecting 28 or more cameras, select “1,2,3”.)
		WHT Setup Mode	$\boxed{\text{AWB}}$, LEVEL	AWB : After executing the Auto Level, white balance adjustment data returns to the value before execution. LEVEL: After executing the Auto Level, white balance adjustment data changes to the value after the white balance is adjusted using Test 2 signal.
		AW Shading Mode	$\boxed{\text{RGB}}$, RB Only	RGB : When automatically adjusting the white balance, R, G, and B signal waveforms are all flattened. RB Only : When automatically adjusting the white balance, R and B signal waveforms are flattened.
		Talk Priority	$\boxed{\text{Talk 1}}$, Talk 2	Selects the channel for which the VTR S/S switch of the lens turns on/off the intercom microphone when the optional 2-channel intercom function of the CA-550/550P is effective and both channel 1 and 2 are in remote mode.
		Canon U-4 Mode	On, $\boxed{\text{Off}}$	Nomally Off. Set to On only when using the BVP-570 in the Canon-made U-4 system.
		W Gain	On, $\boxed{\text{Off}}$	Turn the function on and off to select up to 36 dB master gain for each gain switch position (LOW, MIDDLE, HIGH) (This function is sometimes not activated depending on the type of OHB which is incorporated in the camera.)
		Sensitivity	$\boxed{\text{0}}$, 6 dB	0: Normal mode 6: Select only when the gain is raised by 6 dB on the spot

3-2. Self-Diagnosis

The BVP-550/550P has a diagnosis mode used for self-diagnosis of every plug-in board and the OHB.
The diagnosis page is displayed on the viewfinder screen.

- Operation
  Select "Diagnosis" page of the Operation menu referring to Section 3-1.

- Viewfinder Screen



- Display Descriptions

Marks	Board/Block	Judging Point for NG
①	OHB(CCD UNIT)	Error in communication with IC18, IC19/TG-159
②	PR-242	Error in communication with IC49
③	VA-163A	Error in communication with IC26
④	AT-126	Error in communication with IC46
⑤	SG-234	Error in communication with IC21
⑥	DA-88A	Error in communication with IC10
⑦	IF-510	Error in communication with IC155

Refer to the maintenance manual supplied with the camera adaptor for descriptions on columns of CA.

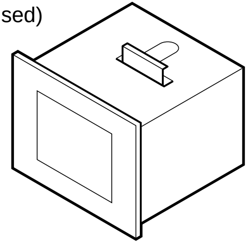
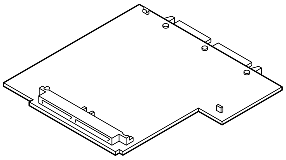
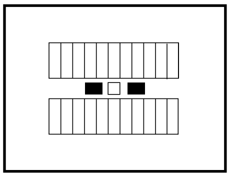
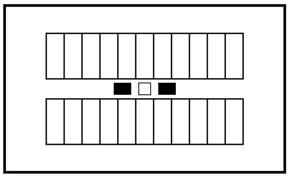
Note

When other equipment than the CA-550/550P/570/570P is connected to the camera, or when the CA-550/550P/570/570P is connected to the camera but is not connected to the CCU, the columns ⑧ will display "– –".

Section 4
Electrical Alignment for OHB Installation

4-1. Preparation

4-1-1. Equipment Required

Pattern box PTB-500	Extension board EX-464 (option)
Sony P/N: J-6029-140-B Power supply AC90 to 240V (When a transparent chart is used) 	**Sony P/N: J-6395-040-A** For plug-in boards 
Grayscale Chart (4:3)	**Grayscale Chart (16:9)**
Transparent chart **Sony P/N: J-6026-130-B** **Reflective chart** (refer to Section 4-1-3.) 	**Transparent chart** **Sony P/N: J-6394-080-A** 

Measuring Equipment

- Frequency counter
  Advantest TR5821AK or equivalent
- Oscilloscope
  Tektronix 2465 or equivalent
- Waveform/Vector monitor
  Tektronix 1750 or equivalent (for NTSC)
  Tektronix 1751 or equivalent (for PAL)
- Digital voltmeter
  Advantest TR6845 or equivalent
- Video signal generator
  Tektronix 1410 or equivalent (for NTSC)
  Tektronix 1411 or equivalent (for PAL)
- Color monitor
  Sony BVM-1911/2811 or equivalent (for NTSC)
  Sony BVM-2011P/3011P or equivalent (for PAL)

Peripheral Equipment

- CCD unit OHB-450/T450WS/550 series [*1]
- Camera adaptor CA-530/550/570 series
- AC adaptor AC-550/550CE
- Master setup unit MSU-700

*1 : The OHB with the specified serial number, requires additional adjustments described in separately available manual.
For details, see to Section "1-1-1. Note on OHB Installation".

4-1-2. Notes on Adjustment

When performing the adjustment, read throughly the following comments.

1. The calibration of all measuring equipment should be completed.
2. The alignment of OHB, CA and MSU should be also completed.
3. To connect each equipment, refer to Section 4-1-4.
4. As for initial settings before beginning adjustment, refer to Section 4-1-6.
5. About ten-minute warm-up time is allowed before beginning adjustment.
6. Turn off the power before extending the plug-in board using the extension board.
7. When using the camera in 16:9 mode together with the 16:9/4:3 switchable OHB and performing adjustments other than VA gain adjustment, use a 16:9-grayscale chart (Sony P/N : J-6394-080-A).
8. Paste a black colored velvets (around 3 × 3 cm) to both sides of the full white portion in the center of a transparent grayscale chart.
   (For more details, contact your local Sony Sale Office/ Service Center.)
9. When connecting the MSU-700 to the camera, use the MSU-700 for various settings, because the switches on the side panel of the camera become invalid.
10. Never change the setting of the following trimmer capacitors. These capacitors are extremely difficult to adjust in the field.
    VA-163A board : ⊘CT200, ⊘CT300, ⊘CT400

4-1-3. Maintaining the Grayscale Chart

For the VA gain adjustment, using an 89.9 %-reflective grayscale chart is preferable.
If a reflective chart is not available, use a well-maintained pattern box and a transparent grayscale chart for adjustment.
Before beginning adjustment, set the illumination of the light source (or the luminous intensity on the chart surface) properly proceeding as follows and set the color temperature to 3200 K exactly by adjusting light.

Information on the reflective grayscale chart

Recommended chart

The reflective grayscale chart is commercially available.

Recommended chart: Reflective grayscale chart (with a special case)
MURAKAMI COLOR RESEARCH LABORATORY GS-3
or equivalent

Supplier: MURAKAMI COLOR RESEARCH LABORATORY
Address: 3-11-3, Kachidoki, Chuo-ku, Tokyo, JAPAN
Postcode 104-0054
Phone: 81-3-3532-3011
Fax: 81-3-3532-2056

Handling precautions

- Do not touch the chart’s surface.
- Do not subject the surface to dirt, scratches or prolonged exposure to sunlight.
- Protect the chart from excess moisture and harmful gas.
- Avoid resting articles against the case.
- Open the case and dry the chart more an hour for a month in no use long period.

Replacement period when the chart is used as the reference

The reflective grayscale chart should be replaced every two years if it used as the reference. Because the chart deteriorates with time and proper adjustment cannot be achieved.
Replacement period varies according to storage conditions of the chart.

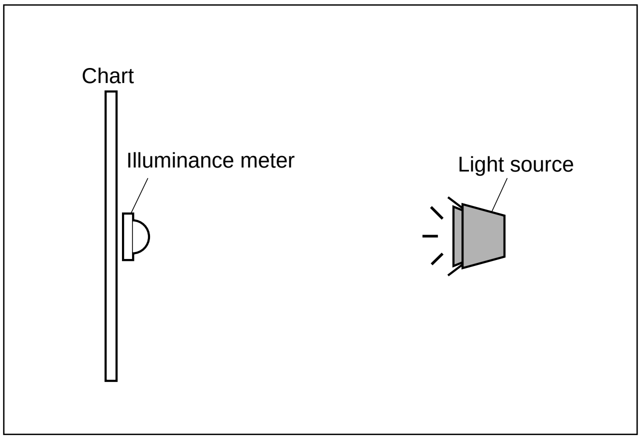
Setting illumination (when the reflective chart is used)

Equipment: Illuminance meter (Calibrated)

1. Turn on the light source and warm up for about 30 minutes.
2. Place the illuminance meter on the chart surface.
   Adjust the position and angle of the light source so that the whole surface of the chart is evenly 2000 lx.

   Note

   Light the chart from almost the same direction and height as the camera to shoot the chart.



Setting luminous intensity (when the transparent chart is used)

Equipment: Luminance meter (Minolta LS-110 or equivalent. Calibrated.)

1. Light the pattern box and warm up for about 30 minutes.
2. Place the pattern box where the chart is not exposed to light, such as a darkroom. (Or cover the pattern box with a cover whose inside is painted in black.)
3. Place the luminance meter facing straight to the chart at a distance of 1 m from it.
4. Adjust the luminance control of the pattern box so that the white portion in the center of the chart is 573 ±6 cd/m^2.

   Note

   This corresponds to the luminous intensity on the 89.9 %-reflective chart at 2000 lx.

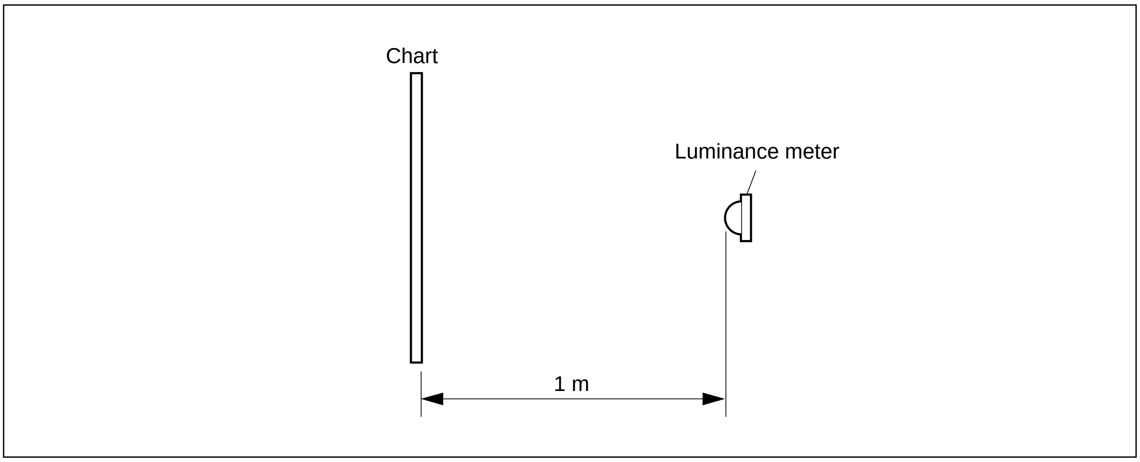
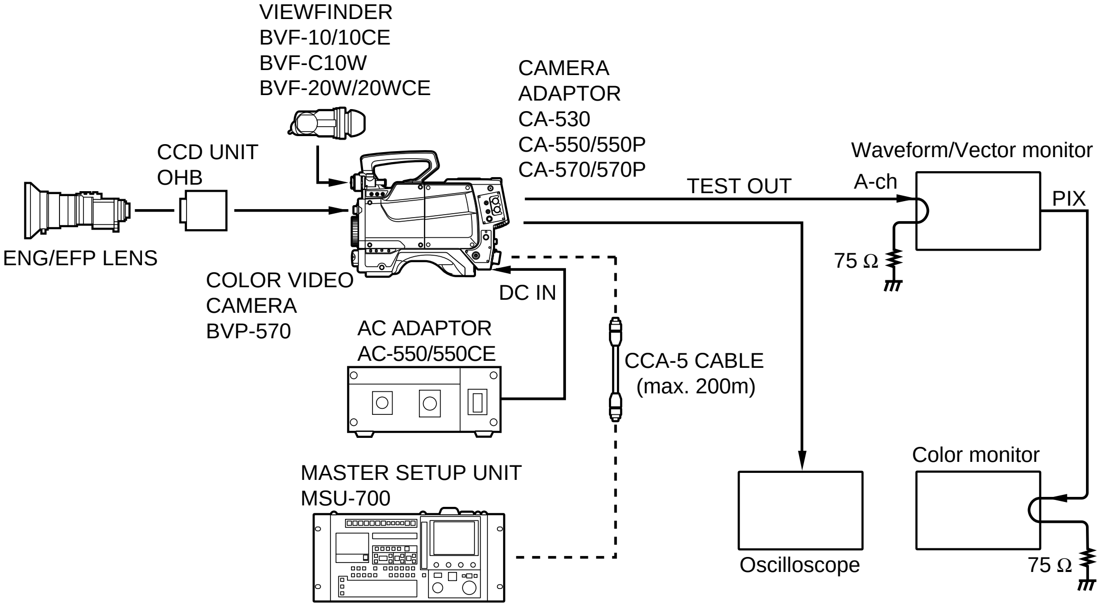


Chart
Luminance meter
1 m

4-1-4. Connections


VIEWFINDER
BVF-10/10CE
BVF-C10W
BVF-20W/20WCE
CAMERA
ADAPTOR
CA-530
CA-550/550P
CA-570/570P
CCD UNIT
OHB
Waveform/Vector monitor
TEST OUT
A-ch
PIX
ENG/EFP LENS
75 Ω
COLOR VIDEO
CAMERA
BVP-570
DC IN
AC ADAPTOR
AC-550/550CE
CCA-5 CABLE
(max. 200m)
Color monitor
MASTER SETUP UNIT
MSU-700
Oscilloscope
75 Ω

4-1-5. Description on Setup Menu

A part of adjustments given in this section uses the setup menu. The setup menu consists of the following menus. Besides there is a TOP menu indicating the entire configuration of menu items.

- Operation
- Paint
- Maintenance
- Reference File
- Trimming File
- System config

To display all of the menus, switch setting of the AT-126 board is required. And for details on the setup menu, refer to Section 3.

In this manual, describes the setup menu operation as follows.

Title of the selected page (top right corner display)

For example:
When Skin Detail in Paint menu is selected:
MENU : Paint
PAGE : Skin Detail (P4)

Displaying Setup Menu

1. Set the internal switches of the AT-126 board as follows.
   S1-1 → ON
   S1-2 → OFF
   S1-3 → ON
   S1-4 → OFF
2. DISP switch (on the side panel) → OFF
3. POWER switch (on the camera adaptor) → ON
4. Set the DISP switch to MENU (from OFF) while holding down the MENU SEL switch (on the front panel). (TOP menu will be displayed.)

Note

If the power switch is turned off once, perform the above operations again to display the setup menu (steps 2 to 4).

How to change the setting values

To enter or cancel the setting value of items, which can be changed by turning the MENU SEL switch, proceed as follows.

To enter the setting value;
Press the MENU SEL switch to ENTER.

To cancel the setting value;
Before pressing the MENU SEL switch, press the CANCEL button. The original setting is restored.
After pressing the MENU SEL switch, the setting can not be canceled.

File Store

If the adjustments in this section are suspended or the unit is powered off to extend a printed circuit board, be sure to execute the FILE STORE before being powered off.
This section provides instructions to store the setting data on the reference or trimming file in every adjustment item. This intends to prevent the data from being cleared when powered off.
The data is kept held unless powered off, and more than one data can be stored at a time. Therefore, the file store may not be necessarily executed for every adjustment item.

4-1-6. Initial Setting

Internal Switches:

Note

When switching the following switches from a customer-set position, it is recommended to record the setting state of the customer in the table below.
After adjustment is complete, be sure to return the switches to their customer-set positions.

Board	Switch	Initial setting	Customer-set position
AT-126	S1-1	ON	
	S1-2	OFF	
	S1-3	ON	
	S1-4	OFF	

Setup Menu:

Note

Be sure to recall the standard file before making the following settings by the setup menu.

- MENU: Operation

Page	Item	Initial setting
Gain Sw (?3)	Low Middle High	0 dB 9 dB 18 dB
Wide Screen (?4) ∗1	16:9/4:3 Mode	16:9

∗1 : This setting shall be done only when the OHB-455WS/455WSP/T450WS/T450WSP/550WS/550WSP or BVP-570WSPK are used.

- MENU: Paint

Page	Item	Initial setting
Video Level(P1)	Test	Off
Detail 1(P2)	Dtl	On
Skin Detail (P4)	Master SW	Off
Gamma(P5)	Gamma	On
W.Clip/Knee(P6)	W.Clip. Knee	Off Off
Matrix(P7)	Matrix	Off

Note

Be sure to execute the reference file store after making the above settings by the setup menu.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store
(Press the MENU SEL switch twice to execute.)

On the Side Panel:

VTR SAVE/STBY switch → STBY
GAIN switch → L (0 dB)
OUTPUT/DCC switch → CAM/OFF
WHITE BAL switch → PRST

On the Front Panel:

SHUTTER switch → OFF

Filter Setting: 3200 K

OHB-550/550WS/455WS series → 1B (FILTER selector)
BVP-570WSPK → 1B (FILTER selector)
OHB-450/451/T450WS series → 1 (FILTER selector)

4-2. VCO CONT Frequency Confirmation

Note:

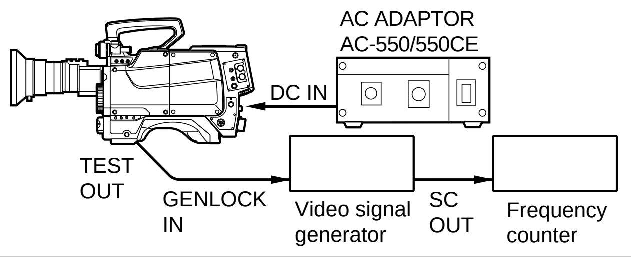
- Warm up the camera for about 10 minutes before performing this confirmation.

Preparation:

- RGB/ENC switch (on the side panel) → ENC

Equipment : Frequency counter, Video signal generator
Test Point : TEST OUT connector
Specifications: 3,579,545 ±10 Hz (for NTSC)
4,433,168 ±5 Hz (for PAL)

If the specification is not satisfied, perform the following adjustment.



Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows and adjust the frequency by using the MENU SEL switch.
   MENU : System config
   PAGE : Y/Chroma (S2)
   ITEM : SC FREQ.
   Specifications: 3,579,545 ±10 Hz (for NTSC)
   4,433,168 ±5 Hz (for PAL)

File Store:

Execute the OHB file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : OHB File (T2)
ITEM : File Store

4-3. VA Gain Adjustment

Equipment : Oscilloscope, Waveform monitor
Object : Grayscale chart

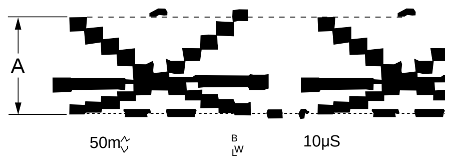
Preparations:

- WHITE BAL switch (on the side panel) → PRST
- GAIN switch (on the side panel) → L (0 dB)
- RGB/ENC switch (on the side panel) → ENC
- Extend VA-163A board with EX-464 board.

Iris of lens : F7.0 or more

Adjustment Procedures:

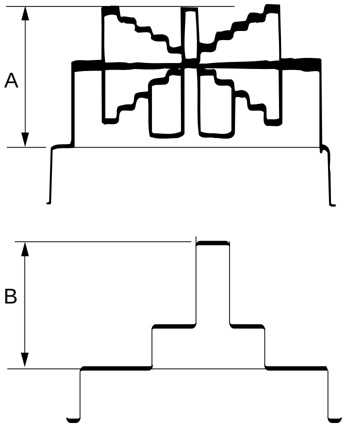
1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Knee → Off
3. Close the lens iris.
4. Execute the level auto setup.
   Press the MENU SEL switch to execute.
   MENU : Operation
   PAGE : Auto Setup
   ITEM : Auto Level
5. Confirm the black level is 3 IRE for NTSC and 21 mV for PAL at the TEST OUT connector.
   If the black level is out of specs, carry out “4-6. Master Black Adjustment”.
6. **Test Point** : TP72 (GND:TP71)/extension board (extending VA-163A)
   Iris of the lens: A = 125 mV (at F7.0 or more)



(Oscilloscope)

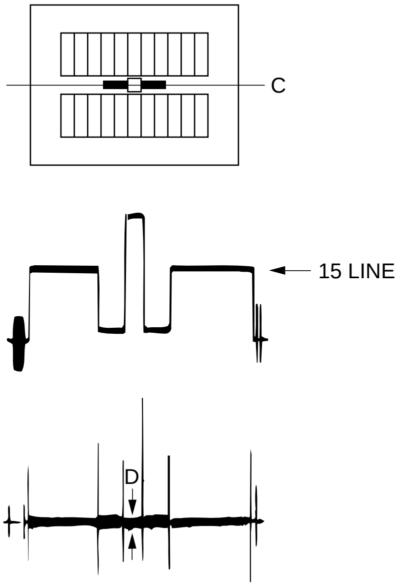
7. Set the RGB/ENC switch (on the side panel) to RGB.
   Set the R/G/B switch (on the side panel) to G.
8. Adjust the VA gain for G.
   Test Point : TEST OUT connector
   Adjustment Point : ⊘RV300 (G GAIN)/VA-163A panel
   Specifications : The levels A and B are shall be equal when the test waveform is switched between 2 and off.

   Menu Setting:
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Test

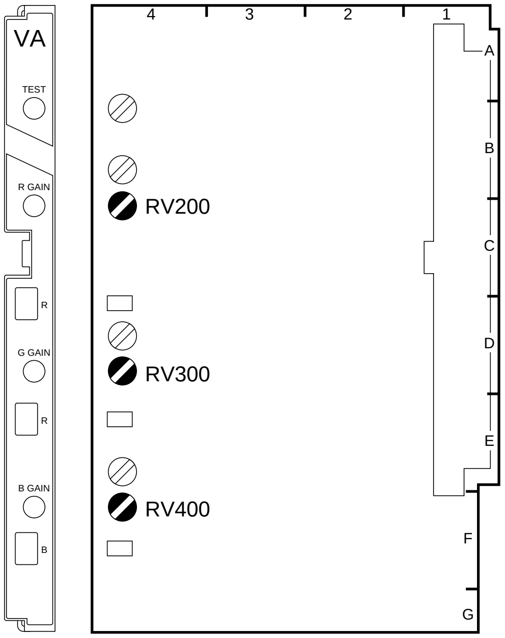


(Waveform Monitor)

9. Set the menu as follows.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Test → Off
10. Select the 15 lines in the center of monitor screen C by using the 15 LINE SELECT on the waveform monitor.
11. Put the waveform monitor into the CHROMA mode.
12. Set the RGB/ENC switch (on the side panel) to ENC.
13. **Test Point** : TEST OUT connector
    Adjustment Point : ⊘RV200 (R GAIN)/VA-163A panel
    ⊘RV400 (B GAIN)/VA-163A panel
    Specifications : Carrier leakage D = Minimum



(Waveform Monitor)



VA-163A BOARD (A SIDE)

4-4. Black Shading Adjustment

Notes:

- The compensation data obtained by the black shading adjustment is not stored in the OHB File. Therefore, when the OHB is replaced or a new OHB is installed, be sure to perform this adjustment. However, only when the auto black adjustment is executed with the AUTO W/B BAL switch on the front panel for the first time after the OHB is replaced or a new OHB is installed, the black shading is automatically adjusted in succession to the auto black adjustment.
  If the shading adjustment is correctly completed at that time, the adjustment in this Section can be skipped.
- If the shading adjustment is not completed, perform the adjustment again referring to the message displayed on the viewfinder or MSU.
  If the re-adjustment still is not completed, contact your local Sony Sale Office/Service Center.)

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- RGB/ENC switch (on the side panel) → ENC

Test Point : TEST OUT connector
Iris of the lens: CLOSE

Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows and execute the auto black shading. Press the MENU SEL switch to execute.
   MENU : Maintenance
   PAGE : Auto Setup(M4)
   ITEM : Black Shading
3. Confirm the "OK" is displayed on the viewfinder or MSU. If the error message is displayed, perform the adjustment again referring to this message.

Message and its meaning

BLACK:OK	: Adjustment correctly completed.
LEVEL TOO HIGH	: Lens closing does not operate fully, and so on.
TIME LIMIT	: Black shading adjustment could not be completed within the specified number of attempts.
OVER FLOW	: The difference between the reference value and the current value is too great, and exceeds adjustment range. Adjustment is then not completed.

4. Confirm the carrier level is less than 2 IRE for NTSC or less than 14 mV for PAL on the waveform monitor.

• Manual Black Shading Adjustment (For reference)

Note:

- Perform this adjustment only when "4-4. Black Shading Adjustment" is not completed.

Equipment : Waveform monitor

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- GAIN switch (on the side panel) → H (18 dB)

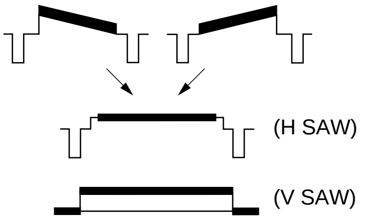
Test Point : TEST OUT connector
Iris of the lens : CLOSE

Adjustment Procedures:

1. Set the waveform monitor as follows.
   - LUM mode
   - VOLTFULL SCALE range → 0.5
2. Set the ENC/RGB switch (on the side panel) to RGB. Set the R/G/B switch (on the side panel) to G.
3. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
4. Set the menu as follows, and adjust the master black level to 3 IRE for NTSC or 21 mV for PAL by using the MENU SEL switch.
   MENU : Maintenance
   PAGE : Black Shading (M3)
   ITEM : Black M

http://getMANUAL.com

5. If the shading is monitored, make the waveform flat referring to the following table.
6. Perform the adjustments for R-ch and B-ch with the same procedures as for G-ch.

	Switch	**H SAW PAGE: Black Shading (M3)**	**V SAW PAGE: Black Shading (M3)**
R	ENC/RGB → RGB R/G/B → R	ITEM: H Saw (R)	ITEM: V Saw (R)
G	ENC/RGB → RGB R/G/B → G	ITEM: H Saw (G)	ITEM: V Saw (G)
B	ENC/RGB → RGB R/G/B → B	ITEM: H Saw (B)	ITEM: V Saw (B)
TEST OUT connector			

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- ENC/RGB switch (on the side panel) → ENC
- GAIN switch (on the side panel) → L (0 dB)

4-5. White Shading Adjustment

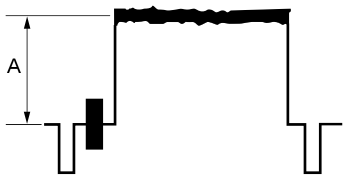
Note:

- This adjustment could not be correctly performed if the uneven white patten is used, luminance is not correct, or lens iris and lens zoom are not in good conditions.

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Full white pattern

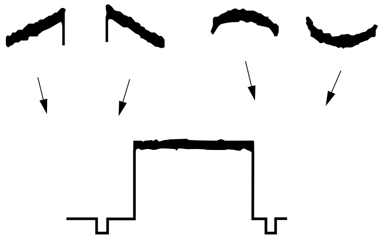
Preparations:

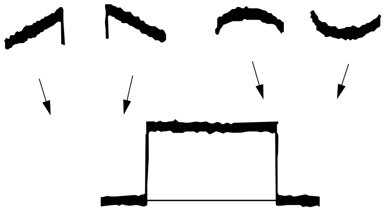
- Connect the waveform monitor to the TEST OUT connector.
- ENC/RGB switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off
- Shoot the fully occupied white area of the pattern box in the full underscanned monitor frame adjusting the zoom control.
  Iris of the lens : A = 80 ±5 IRE (for NTSC)
  A = 560 ±35 mV (for PAL)



Adjustment Procedures:

1. Set the WHITE BAL switch (on the side panel) to PRST.
2. Set the waveform monitor as follows.
   - LUM mode
   - VOLTFULL SCAN range → 0.5
3. Set the ENC/RGB switch (on the side panel) to RGB. Set the R/G/B switch (on the side panel) to G.
4. If the white shading is monitored, make the waveform flat referring to the following tables.
5. Perform the adjustments for R-ch and B-ch with the same procedures as for G-ch.

	Switch	H SAW PAGE: White Shading (M2)	H PARA PAGE: White Shading (M2)
R	ENC/RGB → RGB R/G/B → R	ITEM: H Saw (R)	ITEM: H Para (R)
G	ENC/RGB → RGB R/G/B → G	ITEM: H Saw (G)	ITEM: H Para (G)
B	ENC/RGB → RGB R/G/B → B	ITEM: H Saw (B)	ITEM: H Para (B)
TEST OUT connector			

	Switch	V SAW PAGE: White Shading (M2)	V PARA PAGE: White Shading (M2)
R	ENC/RGB → RGB R/G/B → R	ITEM: V Saw (R)	ITEM: V Para (R)
G	ENC/RGB → RGB R/G/B → G	ITEM: V Saw (G)	ITEM: V Para (G)
B	ENC/RGB → RGB R/G/B → B	ITEM: V Saw (B)	ITEM: V Para (B)
TEST OUT connector			

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- ENC/RGB switch (on the side panel) → ENC

4-6. Master Black Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector

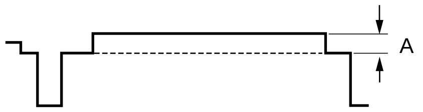
Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- RGB/ENC switch (on the side panel) → RGB
- R/G/B switch (on the side panel) → G

Iris of the lens: CLOSE

Adjustment Procedures:

1. Set the waveform monitor as follows.
   - LUM mode
2. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
3. Set the menu as follows, and adjust the black level by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Black [M]
   Specifications: A = 3 ± 1 IRE (for NTSC)
   A = 21 ± 7 mV (for PAL)



(Waveform Monitor)

3. Set the RGB/ENC switch (on the side panel) to ENC.
4. Adjust the auto black balance.
   AUTO W/B BAL switch (on the front panel) → BLK

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

4-7. Gamma Correction Adjustment

Equipment : Waveform/Vector monitor
Test Point : TEST OUT connector
Object : Grayscale chart

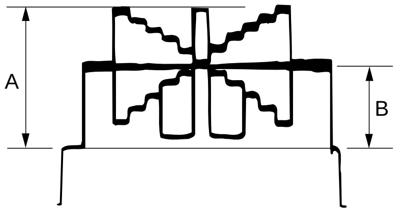
Preparations:

- Connect the waveform/vector monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

Iris of the lens : A = 100 ± 2 IRE (for NTSC)
A = 700 ± 14 mV (for PAL)

Adjustment Procedures:

1. Set the RGB/ENC switch (on the side panel) to RGB. Set the R/G/B switch (on the side panel) to G.
2. Set the menu as follows, and adjust the gamma correction for (M) by using the MENU SEL switch.
   PAGE : Video Level (P1)
   ITEM : Gamma [M]
   Specifications: B = 55.5 ±2.0 IRE (for NTSC)
   B = 420 ±14 mV (for PAL)

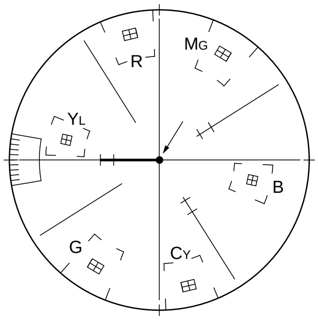


(Waveform Monitor)

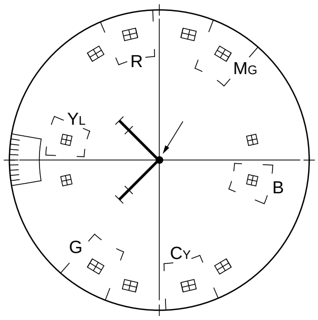
3. Close the lens iris.

4. Set the menu as follows.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Test → 1
5. Set the RGB/ENC switch (on the side panel) to ENC.
6. Adjust the auto white balance.
   WHITE BAL switch (on the side panel) → A
   AUTO W/B BAL switch (on the front panel) → WHT
7. Set the menu as follows, and adjust the gamma correction for (R) by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Gamma [R]
   Specifications: Center the beam spot on the vectorscope.
8. Set the menu as follows, and adjust the gamma correction for (B) by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Gamma [B]
   Specifications: Center the beam spot on the vectorscope.

9. Repeat the steps 7 and 8 alternately, until the beam spot is minimized on the vector monitor.

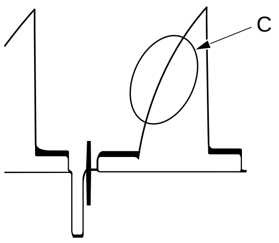


(For NTSC)



(For PAL)

9. Confirm that the carrier leakage does not monitored at portion C on the waveform monitor.
   Specifications: C = Minimum



(Waveform Monitor)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- Set the menu as follows.
  MENU : Paint
  PAGE : Video Level (P1)
  ITEM : Test → Off
- WHITE BAL switch (on the side panel) → PRST

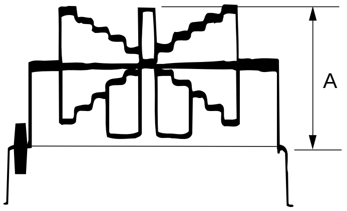
4-8. Flare Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

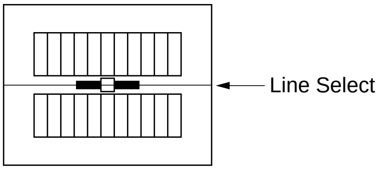
Iris of the lens : A = 100 ±2 IRE (for NTSC)
A = 700 ±14 mV (for PAL)



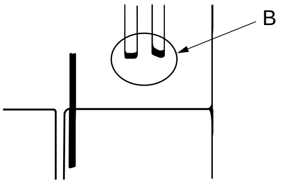
(Waveform Monitor)

Adjustment Procedures:

1. Adjust the auto white balance.
   WHITE BAL switch (on the side panel) → A
   AUTO W/B BAL switch (on the front panel) → WHT
2. Open the iris control of the lens by two stops against the reference setup (corresponding above A).
3. Set the RGB/ENC switch (on the side panel) to ENC.
   Set the R/G/B switch (on the side panel) to G.
4. Select the 15 lines in the center of the monitor screen by using the 15 LINESELECT on the waveform monitor.



5. Confirm that the level at portion B does not fluctuate even if the flare turns On/Off. If fluctuates, turn Flare On and adjust by Flare (G).
   Menu Setting:
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Flare → On/Off
   Adjustment Point:
   ITEM : Flare [G]
6. Set the ENC/RGB switch (on the side panel) to ENC.
7. Set the menu as follows, and adjust the flare for R by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Flare [R]
   Specifications: Minimize the carrier leakage.
8. Set the menu as follows, and adjust the flare for B by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Flare [B]
   Specifications: Minimize the carrier leakage.



(Waveform Monitor)

9. Repeat the steps 7 and 8 alternately, until the carrier leakage is minimized.

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- WHITE BAL switch (on the side panel) → PRST

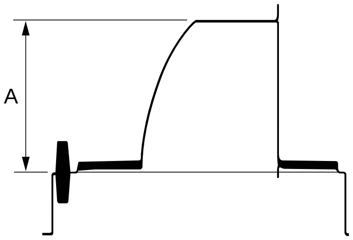
4-9. Knee and White Clip Adjustment

Note:
Perform this adjustment on the customer's preferences, if necessary.

Equipment : Waveform monitor
Test Point : TEST OUT connector

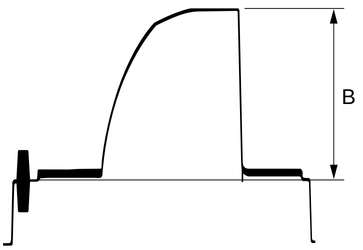
Preparations:
- Connect the waveform monitor to the TEST OUT connector.
- OUTPUT/DCC switch (on the side panel) → CAM/OFF
- RGB/ENC switch (on the side panel) → ENC
- WHITE BAL switch (on the side panel) → PRST
- GAIN switch (on the side panel) → M(9 dB)

Adjustment Procedures:
1. Confirm the black level is 3 IRE for NTSC and 21 mV for PAL.
2. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
3. Set the menu as follows, and adjust the knee point level by using the MENU SEL switch.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Test → 1
   ITEM : W.Clip. → Off
   ITEM : Knee → On
   ITEM : Knee Max → On
   Adjustment Point:
   ITEM : Point
   Specifications: A = 98 ±2 IRE (for NTSC)
   A = 686 ±10 mV (for PAL)



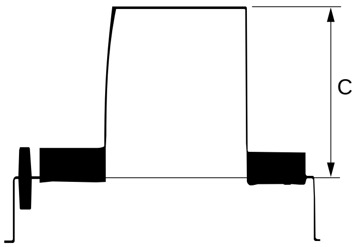
(Waveform Monitor)

4. Set the menu as follows, and adjust the knee slope level by using the MENU SEL switch.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Knee Max → Off
   Adjustment Point:
   ITEM : Slope
   Specifications: B = 109 ±2 IRE (for NTSC)
   B = 763 ±10 mV (for PAL)



(Waveform Monitor)

5. Set the GAIN switch (on the side panel) to H (18 dB).
6. Set the menu as follows, and adjust the white clip level by using the MENU SEL switch.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : W.Clip. → On
   Adjustment Point:
   ITEM : White Clip
   Specifications: C = 109 ±2 IRE (for NTSC)
   C = 750 ±10 mV (for PAL)



(Waveform Monitor)

Resetting after Adjustment:
- Set the menu as follows.
  MENU : Paint
  PAGE : Knee/W.Clip (P6)
  ITEM : Test → Off
- GAIN switch (on the side panel) → L (0 dB).

Note:

The values used in the above adjustments are under the conditions that the white clip level is set to 109 IRE (for NTSC) or 763 mV (for PAL).
When the white clip level is set to other value than 109 IRE or 763 mV, use the following table to set the levels of the knee point and knee slope.

	White Clip Level (Unit: IRE/mV)			
	109/763	107/749	105/735	103/721
Knee point	98/686	98/686	96/672	96/672
Knee slope	109/763	109/763	107/750	107/750
White clip	109/763	107/749	105/735	103/721

4-10. Crispening Adjustment

Note:

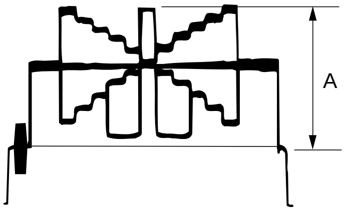
- Perform this adjustment on the customer's preferences, if necessary.

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : Detail 1 (P2)
  ITEM : Detail → On

Iris of the lens : A = 90 ± 2 IRE (for NTSC)
A = 630 ± 14 mV (for PAL)



(Waveform Monitor)

Adjustment Procedure:

Set the menu as follows, and adjust the crispening by using the MENU SEL switch.

MENU : Paint
PAGE : Detail 1(P2)
ITEM : Crispening
Specifications : Turn the MENU SEL switch (on the front panel) once to −99, and turn slowly for increment until the noise at the black level of the waveform is just decreased, or turn the MENU SEL switch so that the crispening level is an appropriate value.

4-11. Level Dependent Adjustment

Note:

- Perform this adjustment on the customer's preferences, if necessary.

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

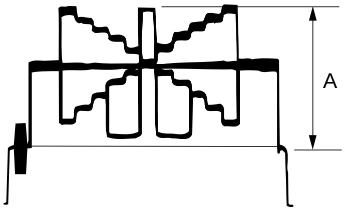
Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.

  MENU : Paint
  PAGE : Detail 1 (P2)
  ITEM : Detail → On
  ITEM : Level Dep. → On

Adjustment Procedures:

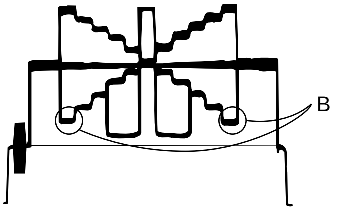
1. **Iris of the lens**: A = 90 ±2 IRE (for NTSC)
   A = 630 ±14 mV (for PAL)



(Waveform Monitor)

2. Set the menu as follows, and adjust the level dependent by using the MENU SEL switch.

   MENU : Paint
   PAGE : Detail 1 (P2)
   ITEM : Level Dep.
   Specifications: Turn the MENU SEL switch (on the front panel) once to –99, and slowly turn it for increment until spikes at portions B are just decreased.



(Waveform Monitor)

Note:

After this adjustment is completed, be sure to perform "4-13. H/V Ratio Adjustment" and "4-14. Detail Level Adjustment".

4-12. Detail Frequency Adjustment

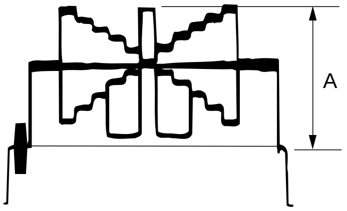
Note:
- Perform this adjustment on the customer's preferences, if necessary.

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:
- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : Detail 2 (P3)
  ITEM : Detail → On
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

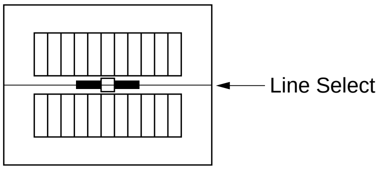
Adjustment Procedures:

1. **Iris of the lens**: A = 90 ± 2 IRE (for NTSC)
   A = 630 ± 14 mV (for PAL)

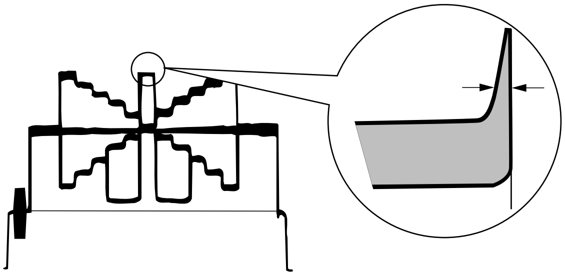


(Waveform Monitor)

2. Make a selection of line at the center white portion of the grayscale chart.



3. Set the menu as follows, and adjust the detail frequency by using the MENU SEL switch.
   MENU : Paint
   PAGE : Detail 2 (P3)
   ITEM : Frequency
   Specifications: Adjust the edge width at each end of the center white portion to the desired width.



(Waveform Monitor)

Note:
After this adjustment is completed, be sure to perform "4-13. H/V Ratio Adjustment" and "4-14. Detail Level Adjustment".

4-13. H/V Ratio Adjustment

Note:

- Perform this adjustment on the customer’s preferences, if necessary.

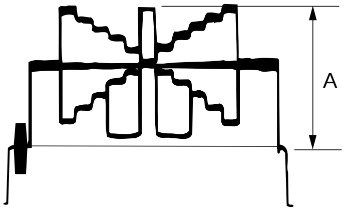
Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : Detail 2 (P3)
  ITEM : Detail → On
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

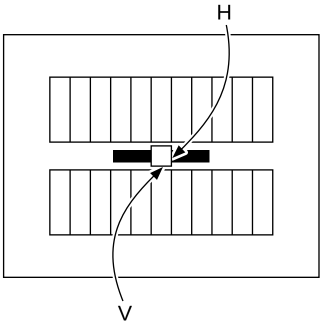
Adjustment Procedures:

1. **Iris of the lens**: A = 90 ±2 IRE (for NTSC)
   A = 630 ±14 mV (for PAL)



(Waveform Monitor)

2. Set the menu as follows, and adjust the H/V ratio by using the MENU SEL switch.
   MENU : Paint
   PAGE : Detail 2 (P3)
   ITEM : H/V Ratio
   Specifications: The ratio between the H and V detail amounts (white) to be added shall be 1 : 1.



http://getMANUAL.com

4-14. Detail Level Adjustment

Note:

- Perform this adjustment on the customer's preferences, if necessary.

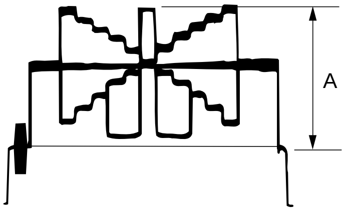
Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : Detail 1 (P2)
  ITEM : Detail → On

Adjustment Procedures:

1. **Iris of the lens**: A = 90 ± 2 IRE (for NTSC)
   A = 630 ± 14 mV (for PAL)



(Waveform Monitor)

2. Set the menu as follows, and adjust the signal level by using the MENU SEL switch.
   MENU : Paint
   PAGE : Detail 1 (P2)
   ITEM : Level
   Specifications: Adjust the detail signal level to be added to each step in the grayscale chart for the desired level.

4-15. Detail Clip Adjustment

Note:

- Perform this adjustment on the customer's preferences, if necessary.

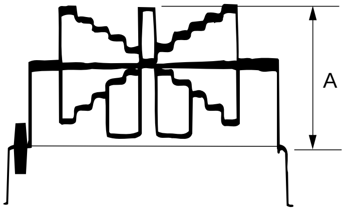
Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : Detail 2 (P3)
  ITEM : Detail → On
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

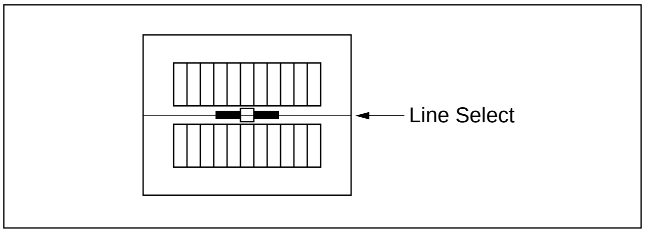
Adjustment Procedures:

1. **Iris of the lens**: A = 90 ± 2 IRE (for NTSC)
   A = 630 ± 14 mV (for PAL)

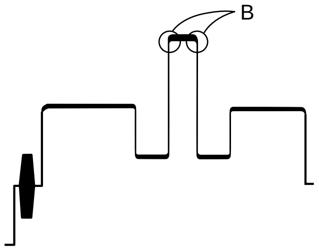


(Waveform Monitor)

2. Make a selection of line at the center white portion of the grayscale chart.

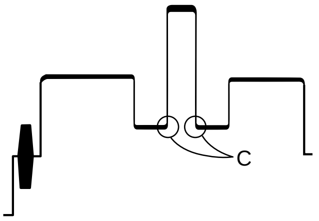


3. Set the menu as follows, and adjust the white limiter by using the MENU SEL switch.
   MENU : Paint
   PAGE : Detail 2 (P3)
   ITEM : W.Limitter
   Specifications: Adjust the edges of portions B to the desired clip level.



(Waveform Monitor)

4. Set the menu as follows, and adjust the black limiter by using the MENU SEL switch.
   MENU : Paint
   PAGE : Detail 2 (P3)
   ITEM : B.Limitter
   Specifications: Adjust the edges of portions C to the desired clip level.



(Waveform Monitor)

4-16. Skin Tone Adjustment

Note:

- Perform this adjustment on the customer's preferences, if necessary.

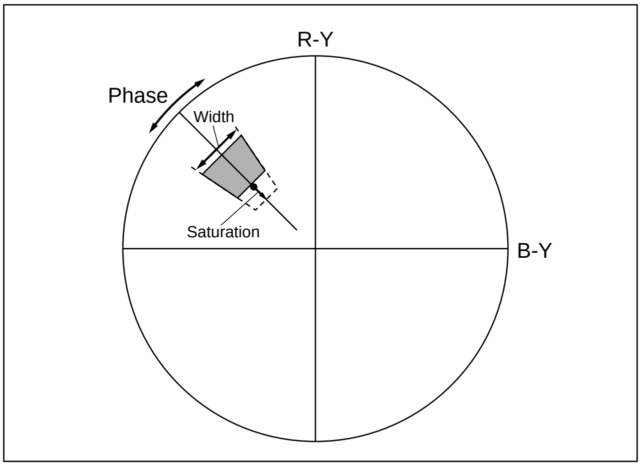
Equipment : Color monitor, Viewfinder or Waveform/Vector monitor

Preparations:

- Connect the waveform/vector monitor to the TEST OUT connector.
- Shoot a person's face.
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : SkinDtl (P4)
  ITEM : Skin Detail → On

Adjustment Procedures:

1. Set the menu as follows.
   MENU : Paint
   PAGE : SkinDtl (P4)
   ITEM : Gate Vf → On
2. Set the menu as follows, and adjust the amount of the skin detail signal to the desired level according to the following items by using the MENU SEL switch.
   MENU : Paint
   PAGE : Skin Detail (P4)
   ITEM : Level (Detail level within the skin gate)
   ITEM : Phase (Hue)
   ITEM : Sat (Component in the saturation direction)
   ITEM : Width (Component in the hue direction)
   (The effective area of the skin detail signal appears in a zebra pattern on the viewfinder screen. Set the desired level.)



Resetting after Adjustment:

- Set the menu as follows.
  MENU : Paint
  PAGE : Skin Detail (P4)
  ITEM : Gate Vf → Off

4-17. Zebra Adjustment

Note:

- Perform this adjustment on the customer's preferences, if necessary.

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

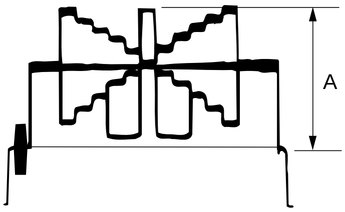
Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- ZEBRA switch (on the viewfinder) → ON
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.

  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

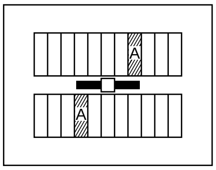
Adjustment Procedures:

1. Adjust the auto white balance.
   WHITE BAL switch (on the side panel) → A
   AUTO W/B BAL switch (on the front panel) → WHT
2. **Iris of the lens**: A = 100 ±2 IRE (for NTSC)
   A = 700 ±14 mV (for PAL)

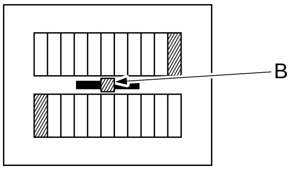


(Waveform Monitor)

3. Set the menu as follows, and adjust the zebra 1 level by using the MENU SEL switch.
   MENU : System config
   PAGE : Preknee/Zebra (S4)
   ITEM : Z.DISP → 1
   Adjustment Point:
   ITEM : Zebra1 [LEVEL]
   Specifications: Adjust that the stripes appear at the center of the portions A on the viewfinder screen.
   The area of the stripes can be changed by ITEM: Zebla 1 [RANGE].



4. Set the menu as follows, and adjust the zebra 2 level by using the MENU SEL switch.
   MENU : System config
   PAGE : Preknee/Zebra (S4)
   ITEM : Z.DISP → 2
   Adjustment Point:
   ITEM : Zebra 2 [LEVEL]
   Specifications: Adjust that the stripes appear at the center of the portions B on the viewfinder screen.



Resetting after Adjustment:

- ZEBRA switch (on the viewfinder) → OFF
- WHITE BAL switch (on the side panel) → PRST

4-18. Auto Iris Adjustment

Note:

- Perform this adjustment on the customer's preferences, if necessary.

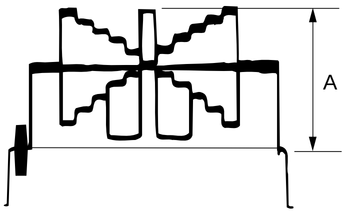
Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- AUTO/MANU switch (on the lens) → AUTO
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

Adjustment Procedures:

1. Adjust the auto white balance.
   WHITE BAL switch (on the side panel) → A
   AUTO W/B BAL switch (on the front panel) → WHT
2. Set the menu as follows, and adjust the APL ratio by using the MENU SEL switch.
   MENU : Operation
   PAGE : Auto Iris/Knee (?6)
   ITEM : APL Ratio
   Specifications: Adjust the auto-iris operation mode depending on the application. (Automatic iris operation mode setting can be done from the average level to peak-to-peak level of the video signal.)
   99 → average level
   –99 → peak-to-peak level
3. Set the menu as follows, and adjust the auto-iris level by using the MENU SEL switch.
   MENU : Operation
   PAGE : Auto Iris/Knee (?6)
   ITEM : Iris Override → Off
   Adjustment Point:
   MENU : System config
   PAGE : Iris (S6)
   ITEM : Level
   Specifications: A = 100 ±2 IRE (for NTSC)
   A = 700 ±14 mV (for PAL)



(Waveform Monitor)

Resetting after Adjustment:

- WHITE BAL switch (on the side panel) → PRST

4-19. Menu Settings After Finishing Adjustment

MENU : Paint
  PAGE : Detail 1 (P2)
  ITEM : Detail → On
  PAGE : Gamma (P5)
  ITEM : Gamma → On
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → On

4-20. File Store

Be sure to execute the file store after any one of the adjustments of Sections 4-3 through 4-18 is performed.

Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Execute the reference file store. Press the MENU SEL switch to execute.

   Menu Setting:

   MENU : Reference File
   PAGE : Reference File (R1)
   ITEM : File Store
3. Execute the Trimming file store. Press the MENU SEL switch twice to execute.

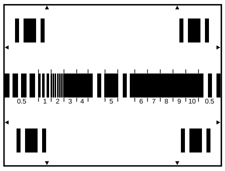
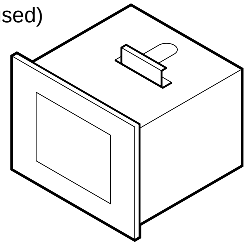
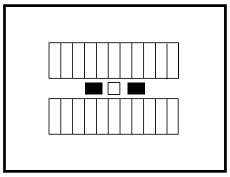
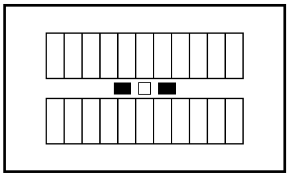
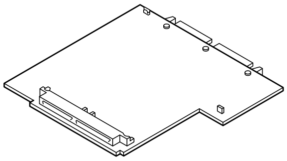
   Menu Setting:

   MENU : Trimming File
   PAGE : Trimming File (T1)
   ITEM : File Store

Section 5
Overall Electrical Alignment

5-1. Preparation

5-1-1. Equipment Required

Multiburst Chart	Pattern box PTB-500
Sony P/N: J-6026-110-A 	**Sony P/N: J-6029-140-B** Power supply AC90 to 240V (When a transparent chart is used) 
Grayscale Chart (4:3)	**Grayscale Chart (16:9)**
Transparent chart **Sony P/N: J-6026-130-B** **Reflective chart** (refer to Section 5-1-3.) 	**Transparent chart** **Sony P/N: J-6394-080-A** 
Extension board EX-464 (option)	
Sony P/N: J-6395-040-A For plug-in boards 	

Measuring Equipment

- Frequency counter
  Advantest TR5821AK or equivalent
- Oscilloscope
  Tektronix 2465 or equivalent
- Waveform/Vector monitor
  Tektronix 1750 or equivalent (for NTSC)
  Tektronix 1751 or equivalent (for PAL)
- Digital voltmeter
  Advantest TR6845 or equivalent
- Video signal generator
  Tektronix 1410 or equivalent (for NTSC)
  Tektronix 1411 or equivalent (for PAL)
- Color monitor
  Sony BVM-1911/2811 or equivalent (for NTSC)
  Sony BVM-2011P/3011P or equivalent (for PAL)

Peripheral Equipment

- CCD unit OHB-450/T450WS/550 series[*1]
- Camera adaptor CA-530/550/570 series
- AC adaptor AC-550/550CE
- Master setup unit MSU-700
- Camera control unit CCU-700A/700AP

*1 : The OHB with the specified serial number, requires additional adjustments described in separately available manual.
For details, see to Section “1-1-1. Note on OHB Installation”.

5-1-2. Notes on Adjustment

When performing the adjustment, read throughly the following comments.

1. The calibration of all measuring equipment should be completed.
2. The alignment of OHB, CA and MSU should be also completed.
3. To connect each equipment, refer to Section 5-1-4.
4. As for initial settings before beginning adjustment, refer to Section 5-1-6.
5. About ten-minute warm-up time is allowed before beginning adjustment.
6. Turn off the power before extending the plug-in board using the extension board.
7. When using the camera in 16:9 mode together with the 16:9/4:3 switchable OHB and performing adjustments other than VA gain adjustment, use a 16:9-grayscale chart (Sony P/N : J-6394-080-A).
8. Paste a black colored velvets (around 3 × 3 cm) to both sides of the full white portion in the center of a transparent grayscale chart.
   (For more details, contact your local Sony Sale Office/Service Center.)
9. When connecting the MSU-700 to the BVP-570, use the MSU-700 for various settings, because the switches on the side panel of the camera become invalid.
10. Never change the setting of the following trimmer capacitors. These capacitors are extremely difficult to adjust in the field.
    VA-163A board : ⊘CT200, ⊘CT300, ⊘CT400

5-1-3. Maintaining the Grayscale Chart

For the VA gain adjustment, using an 89.9 %-reflective grayscale chart is preferable.
If a reflective chart is not available, use a well-maintained pattern box and a transparent grayscale chart for adjustment.
Before beginning adjustment, set the illumination of the light source (or the luminous intensity on the chart surface) properly proceeding as follows and set the color temperature to 3200 K exactly by adjusting light.

Information on the reflective grayscale chart

Recommended chart

The reflective grayscale chart is commercially available.

Recommended chart: Reflective grayscale chart (with a special case)
MURAKAMI COLOR RESEARCH LABORATORY GS-3
or equivalent

Supplier: MURAKAMI COLOR RESEARCH LABORATORY
Address: 3-11-3, Kachidoki, Chuo-ku, Tokyo, JAPAN
Postcode 104-0054
Phone: 81-3-3532-3011
Fax: 81-3-3532-2056

Handling precautions

- Do not touch the chart’s surface.
- Do not subject the surface to dirt, scratches or prolonged exposure to sunlight.
- Protect the chart from excess moisture and harmful gas.
- Avoid resting articles against the case.
- Open the case and dry the chart more an hour for a month in no use long period.

Replacement period when the chart is used as the reference

The reflective grayscale chart should be replaced every two years if it used as the reference. Because the chart deteriorates with time and proper adjustment cannot be achieved.
Replacement period varies according to storage conditions of the chart.

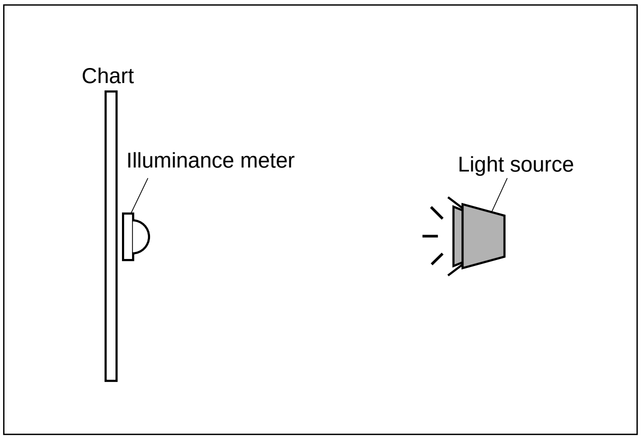
Setting illumination (when the reflective chart is used)

Equipment: Illuminance meter (Calibrated)

1. Turn on the light source and warm up for about 30 minutes.
2. Place the illuminance meter on the chart surface.
   Adjust the position and angle of the light source so that the whole surface of the chart is evenly 2000 lx.

   Note

   Light the chart from almost the same direction and height as the camera to shoot the chart.



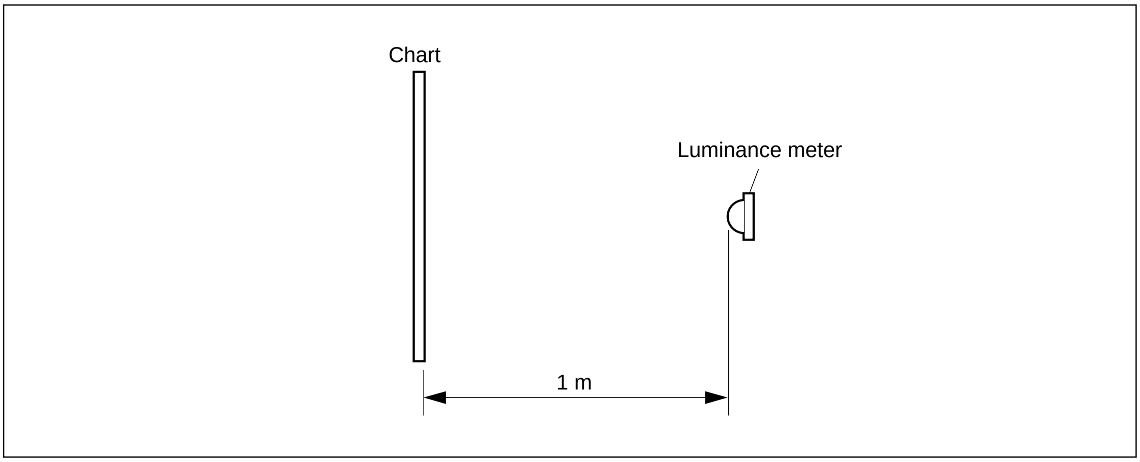
Setting luminous intensity (when the transparent chart is used)

Equipment: Luminance meter (Minolta LS-110 or equivalent. Calibrated.)

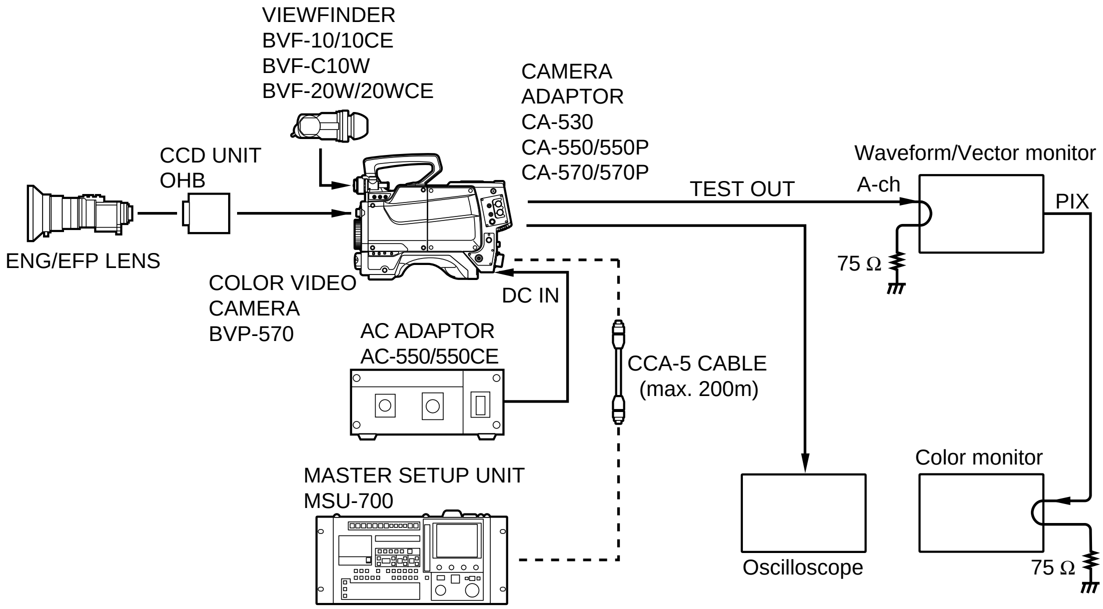
1. Light the pattern box and warm up for about 30 minutes.
2. Place the pattern box where the chart is not exposed to light, such as a darkroom.
   (Or cover the pattern box with a cover whose inside is painted in black.)
3. Place the luminance meter facing straight to the chart at a distance of 1 m from it.
4. Adjust the luminance control of the pattern box so that the white portion in the center of the chart is 573 ±6 cd/m^2.

   Note

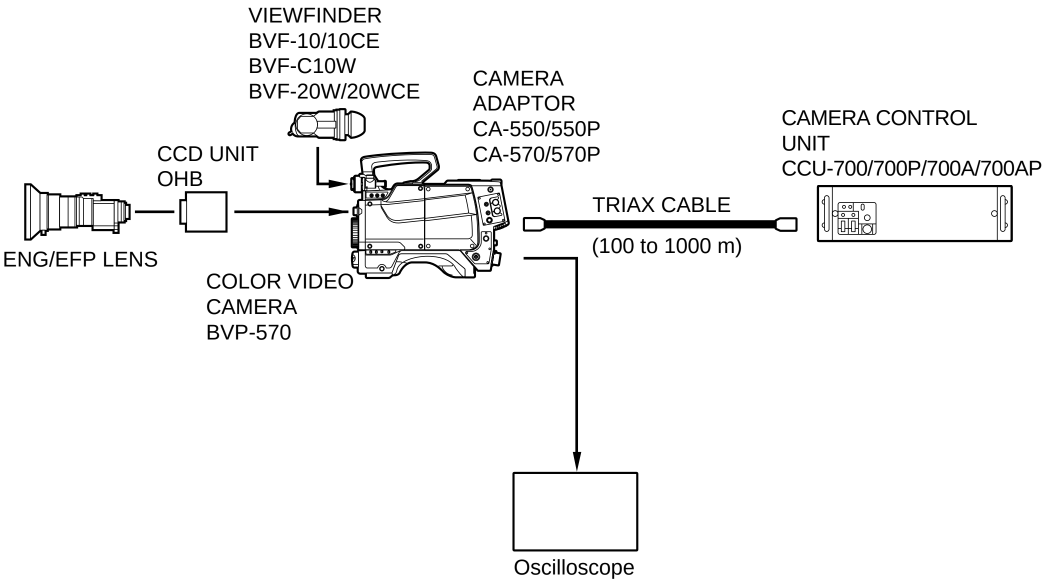
   This corresponds to the luminous intensity on the 89.9 %-reflective chart at 2000 lx.



5-1-4. Connections


VIEWFINDER
BVF-10/10CE
BVF-C10W
BVF-20W/20WCE
CAMERA
ADAPTOR
CA-530
CA-550/550P
CA-570/570P
CCD UNIT
OHB
Waveform/Vector monitor
TEST OUT
A-ch
PIX
ENG/EFP LENS
75 Ω
COLOR VIDEO
CAMERA
BVP-570
DC IN
AC ADAPTOR
AC-550/550CE
CCA-5 CABLE
(max. 200m)
MASTER SETUP UNIT
MSU-700
Color monitor
Oscilloscope
75 Ω

(For CCU Y/R-Y/B-Y adjustment)


VIEWFINDER
BVF-10/10CE
BVF-C10W
BVF-20W/20WCE
CAMERA
ADAPTOR
CA-550/550P
CA-570/570P
CAMERA CONTROL
UNIT
CCU-700/700P/700A/700AP
CCD UNIT
OHB
TRIAX CABLE
(100 to 1000 m)
ENG/EFP LENS
COLOR VIDEO
CAMERA
BVP-570
Oscilloscope

http://getMANUAL.com

5-1-5. Description on Setup Menu

A part of adjustments given in this section uses the setup menu. The setup menu consists of the following menus. Besides there is a TOP menu indicating the entire configuration of menu items.

- Operation
- Paint
- Maintenance
- Reference File
- Trimming File
- System config

To display all of the menus, switch setting of the AT-126 board is required. And for details on the setup menu, refer to Section 3.

In this manual, describes the setup menu operation as follows.

Title of the selected page (top right corner display)

For example:
When Skin Detail in Paint menu is selected:
MENU : Paint
PAGE : Skin Detail (P4)

Displaying Setup Menu

1. Set the internal switches of the AT-126 board as follows.
   S1-1 → ON
   S1-2 → OFF
   S1-3 → ON
   S1-4 → OFF
2. DISP switch (on the side panel) → OFF
3. POWER switch (on the camera adaptor) → ON
4. Set the DISP switch to MENU (from OFF) while holding down the MENU SEL switch (on the front panel). (TOP menu will be displayed.)

Note

If the power switch is turned off once, perform the above operations again to display the setup menu (steps 2 to 4).

How to change the setting values

To enter or cancel the setting value of items, which can be changed by turning the MENU SEL switch, proceed as follows.

To enter the setting value;
Press the MENU SEL switch to ENTER.

To cancel the setting value;
Before pressing the MENU SEL switch, press the CANCEL button. The original setting is restored.
After pressing the MENU SEL switch, the setting can not be canceled.

File Store

If the adjustments in this section are suspended or the unit is powered off to extend a printed circuit board, be sure to execute the FILE STORE before being powered off.
This section provides instructions to store the setting data on the reference or trimming file in every adjustment item. This intends to prevent the data from being cleared when powered off.
The data is kept held unless powered off, and more than one data can be stored at a time. Therefore, the file store may not be necessarily executed for every adjustment item.

5-1-6. Initial Setting

Internal Switches:

Note

When switching the following switches from a customer-set position, it is recommended to record the setting state of the customer in the table below.
After adjustment is complete, be sure to return the switches to their customer-set positions.

Board	Switch	Initial setting	Customer-set position
AT-126	S1-1	ON	
	S1-2	OFF	
	S1-3	ON	
	S1-4	OFF	

Setup Menu:

Note

Be sure to recall the standard file before making the following settings by the setup menu.

MENU : Paint
PAGE : Scene File (P8)
ITEM : Standard
(Press the MENU SEL switch to execute.)

- MENU: Operation

Page	Item	Initial setting
Gain Sw (?3)	Low Middle High	0 dB 9 dB 18 dB
Wide Screen (?4) ✻1	16:9/4:3 Mode	16:9

✻1 : This setting shall be done only when the OHB-455WS/455WSP/T450WS/T450WSP/550WS/550WSP or BVP-570WSPK is used.

- MENU: Paint

Page	Item	Initial setting
Video Level (P1)	Test	Off
Detail 1 (P2)	Dtl	On
Skin Detail 1 (P4)	Master SW	Off
Gamma (P5)	Gamma	On
W.Clip/Knee (P6)	W.Clip. Knee	Off Off
Matrix (P7)	Matrix	Off

Note

Be sure to execute the reference file store after making the above settings by the setup menu.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store
(Press the MENU SEL switch twice to execute.)

On the Side Panel :

VTR SAVE/STBY switch → STBY
GAIN switch → L (0 dB)
OUTPUT/DCC switch → CAM/OFF
WHITE BAL switch → PRST

On the Front Panel :

SHUTTER switch → OFF

Filter Setting : 3200 K

OHB-550/550WS/455WS series → 1B (FILTER selector)
BVP-570WSPK → 1B (FILTER selector)
OHB-450/451/T450WS series → 1 (FILTER selector)

5-1-7. How to Output Camera Color-Bar Signal

When performing adjustments using the camera color-bar signal, there are two approaches to outputting the signal. However, when the unit is used with the MSU-700, use the setup menu to output the camera color-bar signal because the OUTPUT/DCC switch on the side panel is deactivated.

Note

When the unit is used with the MSU-700, the BARS button of the MSU-700 can not used to output the camera color-bar signal, too.

- OUTPUT/DCC switch (Side panel) → BARS
  or
- System config menu
  PAGE : Y/Chroma (S2)
  ITEM : CB → On

5-2. VCO CONT Frequency Adjustment

Note:

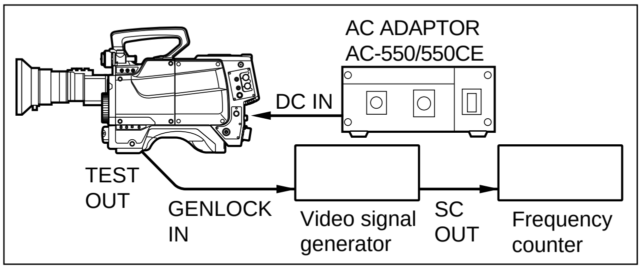
- Warm up the camera for about 10 minutes before beginning adjustments.

Preparation:

- RGB/ENC switch (on the side panel) → ENC

Equipment : Frequency counter,
Video signal generator

Test Point : TEST OUT connector


AC ADAPTOR
AC-550/550CE
DC IN
TEST
OUT
GENLOCK
IN
Video signal
generator
SC
OUT
Frequency
counter

Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows and adjust the frequency by using the MENU SEL switch.
   MENU : System config
   PAGE : Y/Chroma (S2)
   ITEM : SC FREQ.
   Specifications : 3,579,545 ±10 Hz (for NTSC)
   4,433,168 ±5 Hz (for PAL)

File Store:

Execute the OHB file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : OHB File (T2)
ITEM : File Store

5-3. VTR Y Adjustment

E-quipment : Waveform monitor
Test Point : TEST OUT connector

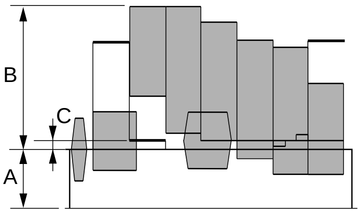
Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- OUTPUT/DCC switch (on the side panel) → BARS (Refer to Section 5-1-7 "How to Output Camera Color-Bar Signal".)
- RGB/ENC switch (on the side panel) → ENC
- WHITE BAL switch (on the side panel) → PRST

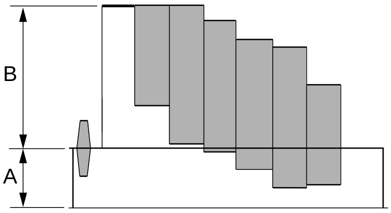
Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows, and adjust the Y sync by using the MENU SEL switch.
   MENU : System config
   PAGE : Y/Chroma (S2)
   ITEM : Y SYNC
   Specification : A = 40 ±1 IRE (for NTSC)
   A = 300 ±2 mV (for PAL)

3. (NTSC only)
   Confirm that the test setup "C" is 7.5 ± 1 IRE.
   Note
   If the specification is not satisfied, adjust the test setup referring to Section 5-4 "Test Out Adjustment".
4. Set the menu as follows, and adjust the Y video by using the MENU SEL switch.
   MENU : System config
   PAGE : Y/Chroma (S2)
   ITEM : Y Video
   Specifications: B = 100 ±2 IRE (for NTSC)
   B = 700 ±7 mV (for PAL)



(For NTSC)



(For PAL)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

5-4. Test Out Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- OUTPUT/DCC switch (on the side panel) → BARS (Refer to Section 5-1-7 “How to Output Camera Color-Bar Signal”.)
- RGB/ENC switch (on the side panel) → ENC

Adjustment Procedures:

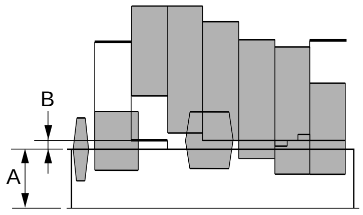
1. **Adjustment Point** : ⊘RV101 (VIDEO LEVEL)/
IF-510 panel
Specifications : A = 40 ± 1 IRE (for NTSC)
A = 300 ± 2 mV (for PAL)

2. (NTSC only)
Set the menu as follows, and adjust the test setup by using the MENU SEL.
MENU : System config
PAGE : Y/Chroma (S2)
ITEM : TEST SETUP
Specifications : B = 7.5 ± 1 IRE

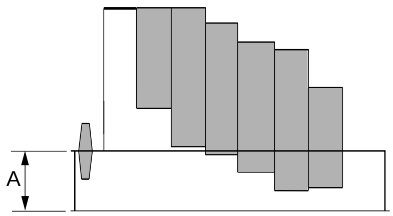
File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

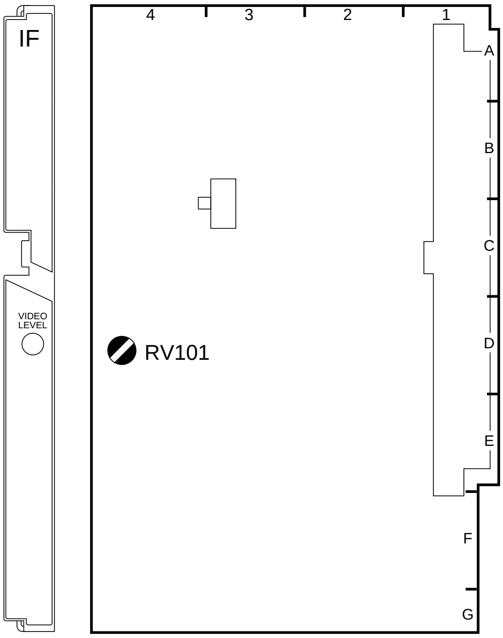
MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store



(For NTSC)



(For PAL)



IF-510 BOARD (A SIDE)

5-5. Chroma Adjustment

Equipment : Waveform/Vector monitor
Test Point : TEST OUT connector

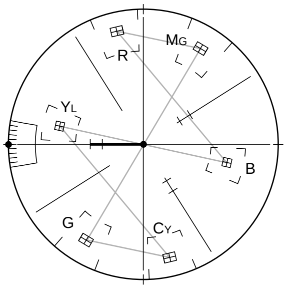
Preparations:

- Connect the waveform/vector monitor to the TEST OUT connector.
- OUTPUT/DCC switch (on the side panel) → BARS (Refer to Section 5-1-7 "How to Output Camera Color-Bar Signal".)
- RGB/ENC switch (on the side panel) → ENC

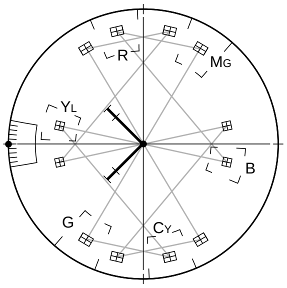
Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows, and adjust the chroma level and Q/V level alternately by using the MENU SEL switch.

MENU : System config
PAGE : Y/Chroma (S2)
ITEM : Chroma LVL
ITEM : Q/V LVL
Specification : Place the beam spots inside the corresponding frames on the vector monitor.



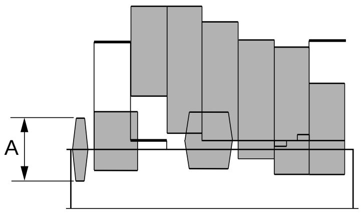
(For NTSC)



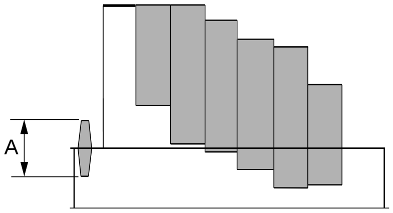
(For PAL)

3. Set the menu as follows, and adjust the burst level by using the MENU SEL switch.

MENU : System config
PAGE : Y/Chroma (S2)
ITEM : Burst LVL
Specification : A = 40 ±1 IRE (for NTSC)
A = 300 ±5 mV (for PAL)



(For NTSC)



(For PAL)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

5-6. INT SC Phase Adjustment

Notes:

This adjustment procedures are stated below assuming that the Tektronix 1750 (for NTSC) or1751 (for PAL) is used. If any other measuring instrument is used, follow the instructions given in the operation manual attached to it.

Equipment : Waveform/Vector monitor
(SC-H Phase measuring mode)
Test Point : TEST OUT connector

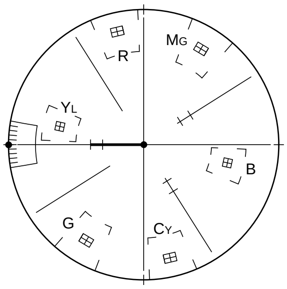
Preparations:

- Connect the waveform/vector monitor to the TEST OUT connector.
- OUTPUT/DCC switch (on the side panel) → BARS
- RGB/ENC switch (on the side panel) → ENC

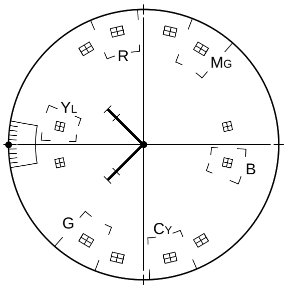
Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows, and adjust the SC-H phase by using the MENU SEL switch.

   MENU : System config
   PAGE : Y/Chroma (S2)
   ITEM : SC-H Phase
   Specification : Position the luminous lines of the burst (SC) and the beam spot of H as shown in the figure.



(For NTSC)



(For PAL)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

5-7. VF Level Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector

Preparations:

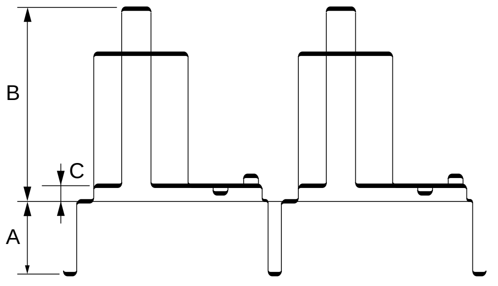
- Connect the waveform monitor to the TEST OUT connector.
- OUTPUT/DCC switch (on the side panel) → BARS (Refer to Section 5-1-7 "How to Output Camera Color-Bar Signal".)
- RGB/ENC switch (on the side panel) → RGB
- R/G/B switch (on the side panel) → G

Adjustment Procedures:

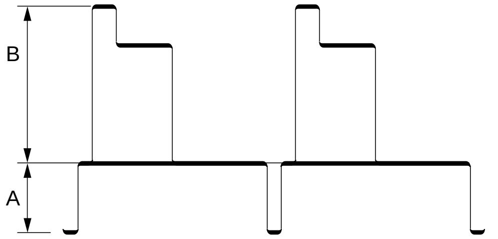
1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows, and adjust the sync level by using the MENU SEL switch.
   MENU : System config
   PAGE : Y/Chroma (S2)
   ITEM : REG LVL
   Specification : A = 40 ±1 IRE (for NTSC)
   A = 300 ±2 mV (for PAL)

   Note

   During REG LVL adjustment, levels "A" and "B" will vary together.
3. (NTSC only)
   Confirm that the VF setup level "C" is 7.5 ±1 IRE.
4. Set the menu as follows, and adjust the video level by using the MENU SEL switch.
   MENU : System config
   PAGE : Y/Chroma (S2)
   ITEM : VF
   Specification : B = 100 ±2 IRE (for NTSC)
   B = 700 ±14 mV (for PAL)



(For NTSC)



(For PAL)

(Waveform Monitor)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

Resetting after Adjustment:

- RGB/ENC switch (on the side panel) → ENC

5-8. TEST 1 Adjustment

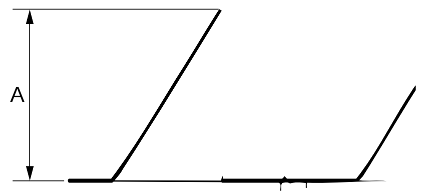
Equipment : Oscilloscope

Preparation:

- Extend VA-163A board with EX-464 board.

Adjustment Procedures:

1. WHITE BAL switch (on the side panel) → PRST
2. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
3. Set the menu as follows.
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : Test → 1
4. **Test Point** : TP52 (GND:GND (A))/ Extension board (extending VA-163A)
   Adjustment Point : ⊘RV50 (TEST) /VA-163A panel
   Specifications : A = 670 ± 2 mV



(Waveform Monitor)

5. Set the menu as follows, and adjust the white level for R by using the MENU SEL switch.
   Test Point : TP54 (GND:GND (A))/ Extension board (extending VA-163A)
   Adjustment Point:
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : White [R]
   Specifications : A = 670 ± 40 mV
6. Set the menu as follows, and adjust the white level for B by turning the MENU SEL switch.
   Test Point : TP50 (GND:GND (A))/ Extension board (extending VA-163A)
   Adjustment Point:
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : White [B]
   Specifications : A = 670 ±40 mV

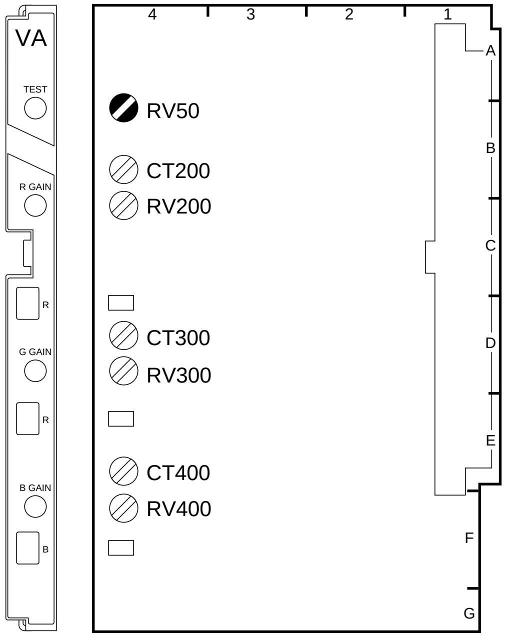
File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

Resetting after Adjustment:

- Set the menu as follows.
  MENU : System config
  PAGE : PR/VA/Test (S3)
  ITEM : Test → Off



VA-163A BOARD (A SIDE)

5-9. TEST 2 Adjustment

Equipment : Oscilloscope
Test Point : TP52 (GND:GND (A))/
Extension board (extending VA-163A)

Preparation:

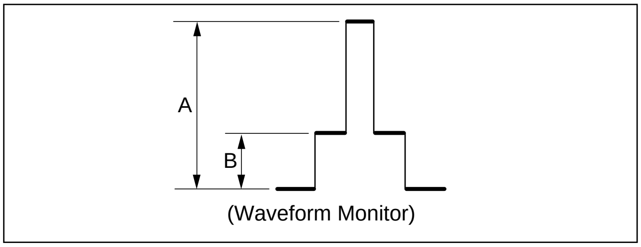
- Extend VA-163A board with EX-464 board.

Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows.
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : Test → 2

3. Set the menu as follows, and adjust the TEST2 high level by using the MENU SEL switch.
   MENU : System config
   PAGE : PR/VA/TEST (S3)
   ITEM : Test 2 HI
   Specifications: A = 670 ± 5 mV

4. Set the menu as follows, and adjust the TEST 2 middle level by using the MENU SEL switch.
   MENU : System config
   PAGE : PR/VA/TEST (S3)
   ITEM : Test 2 MID
   Specifications: B = 220 ± 5 mV



(Waveform Monitor)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.
MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

Resetting after Adjustment:

- Set the menu as follows.
  MENU : System config
  PAGE : PR/VA/Test (S3)
  ITEM : TEST → Off

5-10. A/D Gain Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector

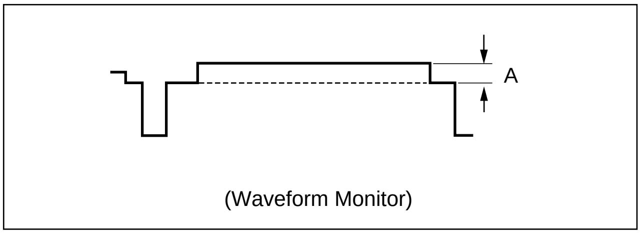
Preparations:

- Open the left side panel.
- Connect the waveform monitor to the TEST OUT connector.
- GAIN switch (on the side panel) → L (0 dB)
- RGB/ENC switch (on the side panel) → RGB
- R/G/B switch (on the side panel) → G
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : Detail1 (P2)
  ITEM : Detail → Off
  PAGE : Gamma (P5)
  ITEM : Gamma → On
  PAGE : W.Clip/Knee (P6)
  ITEM : W.Clip → Off
  ITEM : Knee → Off

Iris of the lens : CLOSE

Adjustment Procedures:

1. Set the waveform monitor as follows.
   - LUM mode
2. Set the menu as follows, and adjust the black level by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Black [M]
   Specifications: A = 3 ±1 IRE (for NTSC)
   A = 21 ±7 mV (for PAL)

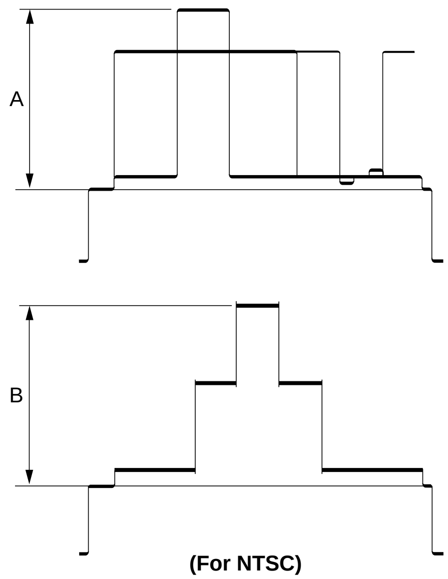


(Waveform Monitor)

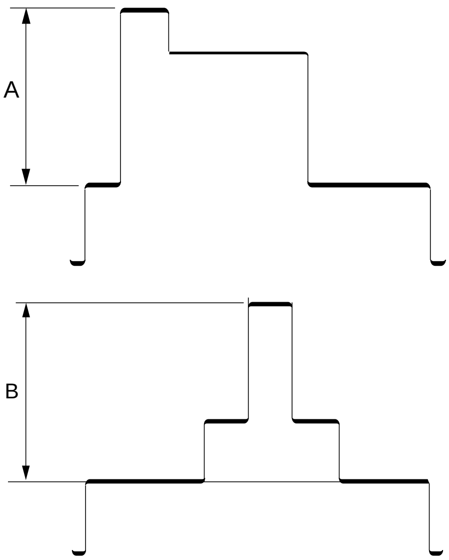
3. Adjust the auto black balance.
   AUTO W/B BAL switch (on the front panel) → BLK
4. Set the menu as follows.
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : Test → 2

http://getMANUAL.com

5. Set the menu as follows, and adjust the A/D gain for G by using the MENU SEL switch.
   Adjustment Point : ⊘RV1 (G GAIN)/PR-242
   Specifications : The white level shall not be changed even if the OUTPUT/DCC switch (on the side panel) is changed over between CAM and BARS.
   A = B

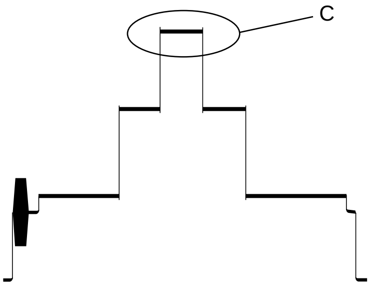


(For NTSC)



(For PAL)

6. Set the R/G/B switch (on the side panelüj to ENC.
7. Set the OUTPUT/DCC switch (on the side panel) to CAM/OFF.
8. Set the menu as follows, and adjust the A/D gain for R by using the MENU SEL switch.
   Adjustment Point : ⊘RV2 (R GAIN)/PR-242
   Specifications : Minimize the carrier leakage.
   C = Minimum
9. Set the menu as follows, and adjust the A/D gain for B by using the MENU SEL switch.
   Adjustment Point : ⊘RV3 (B GAIN)/PR-242
   Specifications : Minimize the carrier leakage.
   C = Minimum



(This waveform is for NTSC)

10. Repeat the steps 8 and 9 alternately until the specifications are satisfied.

File Store:

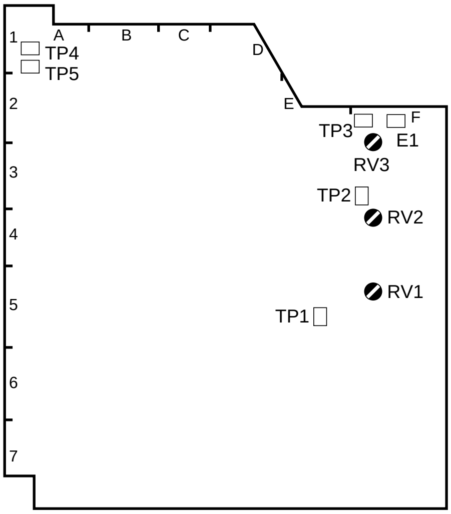
Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

Resetting after Adjustment:

- Set the menu as follows.

MENU : System config
PAGE : PR/VA/Test (S3)
ITEM : Test → Off



PR-242 BOARD (A SIDE)

5-11. VA Gain Adjustment

Note:

For the VA gain adjustment, using an 89.9%-reflective grayscale chart is preferable.
Before beginning adjustment, be sure to set the illumination of the light source (or the lumirous intensity on the chart surface) and to set the color temperature exactly.
For details, refer to Section 5-1-3 “Maintaining the Grayscale Chart”

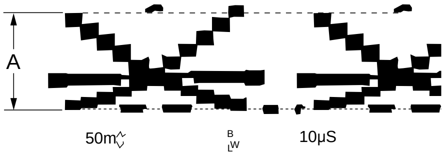
Equipment : Oscilloscope, Waveform monitor
Object : Grayscale chart

Preparations:

- This adjustment shall be performed at F7.0 or more.
- WHITE BAL switch (on the side panel) → PRST
- GAIN switch (on the side panel) → L (0 dB)
- RGB/ENC switch (on the side panel) → ENC
- Extend VA-163A board with EX-464 board.

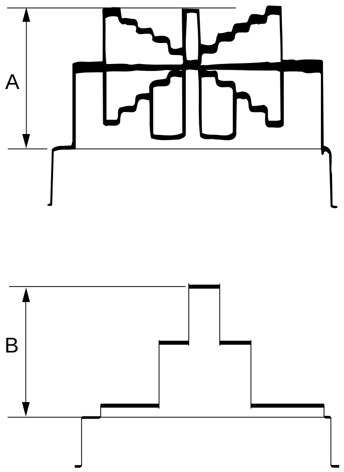
Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Knee → Off
3. Close the lens iris.
4. Execute the level auto setup.
   Press the MENU SEL switch to execute.
   MENU : Operation
   PAGE : Auto Setup
   ITEM : Auto Level
5. Confirm the black level is 3 IRE for NTSC or 21 mV for PAL at the TEST OUT connector.
   If the black level is out of specs, carry out “5-15. Master Black Adjustment”.
6. **Test Point** : TP72 (GND:TP71)/extension board (extending VA-163A)
   Iris of the lens: A = 125 mV (at F7.0 or more)

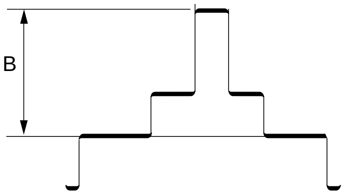


(Oscilloscope)

7. Set the RGB/ENC switch (on the side panel) to RGB.
   Set the R/G/B switch (on the side panel) to G.
8. Adjust the VA gain for G.
   Test Point : TEST OUT connector
   Adjustment Point : ⊘RV300 (G GAIN)/VA-163A panel
   Specifications : The levels A and B are shall be equal when the test waveform is switched between 2 and off.
   Menu Setting:
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Test



(For NTSC)

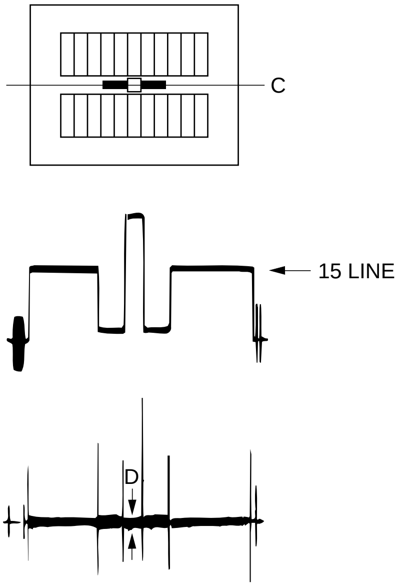


(For PAL)

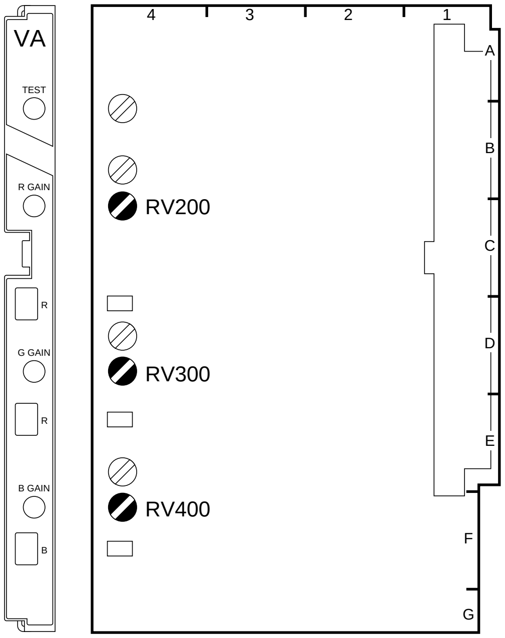
(Waveform Monitor)

9. Set the menu as follows.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Test → Off
10. Select the 15 lines in the center of monitor screen C by using the 15 LINE SELECT on the waveform monitor.
11. Put the waveform monitor into the CHROMA mode.

12. Set the RGB/ENC switch (on the side panel) to ENC.
13. **Test Point** : TEST OUT connector
    Adjustment Point : ⊘RV200 (R GAIN)/VA-163A panel
    ⊘RV400 (B GAIN)/VA-163A panel
    Specifications : Carrier leakage D = Minimum



(Waveform Monitor)


VA
TEST
R GAIN
R
G GAIN
R
B GAIN
B
4
3
2
1
A
B
C
D
E
F
G
RV200
RV300
RV400

VA-163A BOARD (A SIDE)

5-12. VA MOD Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- GAIN switch (on the side panel) → L (0 dB)
- RGB/ENC switch (on the side panel) → RGB
- R/G/B switch (on the side panel) → R

Iris of the lens : CLOSE

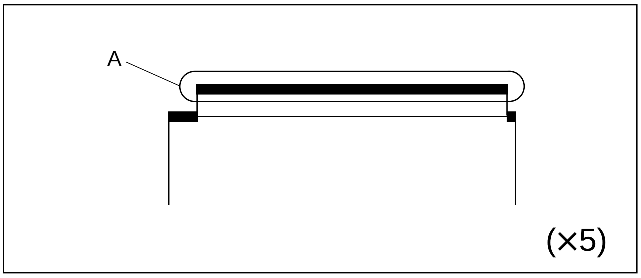
Adjustment Procedures:

1. Set the waveform monitor as follows.
   - LUM mode
2. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
3. Set the menu as follows, and adjust the V MOD for R by using the MENU SEL switch.

   MENU setting:
   MENU : Maintenance
   PAGE : White Shading (M2)
   ITEM : H Saw [R] → 99

   Adjustment Point:
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : VA MOD [R]

   Specifications: Flatten the portion A.
   Adjust so that the level at portion A does not fluctuate even if the setting value for H Saw [R] varies from 99 to –99.



4. Set the R/G/B switch (on the side panel) to G.
5. Set the menu as follows, and adjust the V MOD for G by using the MENU SEL switch.

   MENU setting:
   MENU : Maintenance
   PAGE : White Shading (M2)
   ITEM : H Saw [G] → 99

   Adjustment Point:
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : VA MOD [G]

   Specifications: Flatten the portion A.
   Adjust so that the level at portion A does not fluctuate even if the setting value for H Saw [G] varies from 99 to –99.

6. Set the R/G/B switch (on the side panel) to B.
7. Set the menu as follows, and adjust the V MOD for R by using the MENU SEL switch.

   MENU setting:
   MENU : Maintenance
   PAGE : White Shading (M2)
   ITEM : H Saw [B] → 99

   Adjustment Point:
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : VA MOD [B]

   Specifications: Flatten the portion A.
   Adjust so that the level at portion A does not fluctuate even if the setting value for H Saw [B] varies from 99 to –99.

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

Resetting after Adjustment:

- Set the menu as follows. Press the MENU SEL switch to execute.

  MENU : Maintenance
  PAGE : White Shading (M2)
  ITEM : Clear

5-13. Black Shading Adjustment

Note:

If the shading adjustment is not completed, perform the adjustment again referring to the message displayed on the viewfinder or MSU.
If the re-adjustment still is not completed, consult your local Sony Sales Office/Service Center.

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- RGB/ENC switch (on the side panel) → ENC

Test Point : TEST OUT connector
Iris of the lens: CLOSE

Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows and execute the auto black shading. Press the MENU SEL switch to execute.
   MENU : Maintenance
   PAGE : Auto Setup(M4)
   ITEM : Black Shading
3. Confirm the "OK" is displayed on the viewfinder or MSU. If the error message is displayed, perform the adjustment again referring to this message.

Message and its meaning

BLACK:OK	: Adjustment correctly completed.
LEVEL TOO HIGH	: Lens closing does not operate fully.
TIME LIMIT	: Black shading adjustment could not be completed within the specified number of attempts.
OVER FLOW	: The difference between the reference value and the current value is too great, and exceeds adjustment range. Adjustment is then not completed.

4. Confirm the carrier level is less than 2 IRE for NTSC or less than 14 mV for PAL on the waveform monitor.

- **Manual Black Shading Adjustment (For reference)**

Note:

- Perform this adjustment only when "5-13. Black Shading Adjustment" is not completed.

Equipment : Waveform monitor

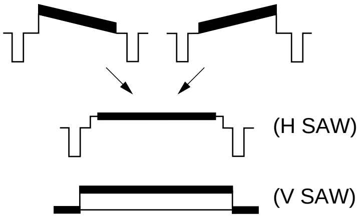
Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- GAIN switch (on the side panel) → H (18 dB)

Test Point : TEST OUT connector
Iris of the lens : CLOSE

Adjustment Procedures:

1. Set the waveform monitor as follows.
   - LUM mode
   - VOLTFULL SCALE range → 0.5
2. Set the ENC/RGB switch (on the side panel) to RGB. Set the R/G/B switch (on the side panel) to G.
3. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
4. Set the menu as follows, and adjust the master black level to 3 IRE for NTSC or 21 mV for PAL by using the MENU SEL switch.
   MENU : Maintenance
   PAGE : Black Shading (M3)
   ITEM : Black M
5. If the shading is monitored, make the waveform flat referring to the following table.
6. Perform the adjustments for R-ch and B-ch with the same procedures as for G-ch.

	Switch	**H SAW** **PAGE:** **Black Shading (M3)**	**V SAW** **PAGE:** **Black Shading (M3)**
R	ENC/RGB → RGB R/G/B → R	ITEM: H Saw (R)	ITEM: V Saw (R)
G	ENC/RGB → RGB R/G/B → G	ITEM: H Saw (G)	ITEM: V Saw (G)
B	ENC/RGB → RGB R/G/B → B	ITEM: H Saw (B)	ITEM: V Saw (B)
TEST OUT connector			

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- ENC/RGB switch (on the side panel) → ENC
- GAIN switch (on the side panel) → L (0 dB)

5-14. White Shading Adjustment

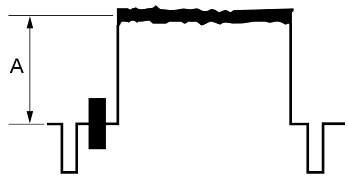
Note:

- This adjustment could not be correctly performed if the uneven white patten is used, luminance is not correct, or lens iris and lens zoom are not in good conditions.

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Full white pattern

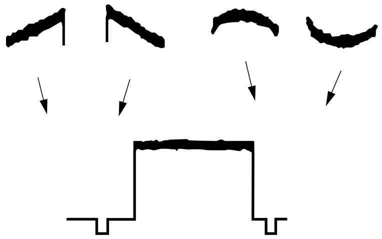
Preparations:

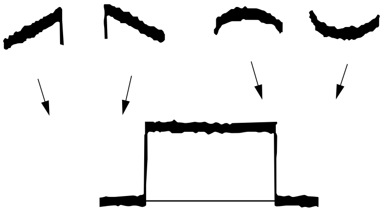
- Connect the waveform monitor to the TEST OUT connector.
- ENC/RGB switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off
- Shoot the fully occupied white area of the pattern box in the full underscanned monitor frame adjusting the zoom control.
  Iris of the lens : A = 80 ±5 IRE (for NTSC)
  A = 560 ±35 mV (for PAL)



Adjustment Procedures:

1. Set the WHITE BAL switch (on the side panel) to PRST.
2. Set the waveform monitor as follows.
   - LUM mode
   - VOLTFULL SCAN range → 0.5
3. Set the ENC/RGB switch (on the side panel) to RGB. Set the R/G/B switch (on the side panel) to G.
4. If the white shading is monitored, make the waveform flat referring to the following tables.
5. Perform the adjustments for R-ch and B-ch with the same procedures as for G-ch.

	Switch	H SAW PAGE: White Shading (M2)	H PARA PAGE: White Shading (M2)
R	ENC/RGB → RGB R/G/B → R	ITEM: H Saw (R)	ITEM: H Para (R)
G	ENC/RGB → RGB R/G/B → G	ITEM: H Saw (G)	ITEM: H Para (G)
B	ENC/RGB → RGB R/G/B → B	ITEM: H Saw (B)	ITEM: H Para (B)
TEST OUT connector			

	Switch	V SAW PAGE: White Shading (M2)	V PARA PAGE: White Shading (M2)
R	ENC/RGB → RGB R/G/B → R	ITEM: V Saw (R)	ITEM: V Para (R)
G	ENC/RGB → RGB R/G/B → G	ITEM: V Saw (G)	ITEM: V Para (G)
B	ENC/RGB → RGB R/G/B → B	ITEM: V Saw (B)	ITEM: V Para (B)
TEST OUT connector			

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- ENC/RGB switch (on the side panel) → ENC

5-15. Master Black Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector

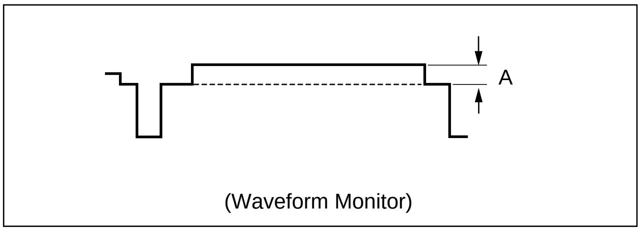
Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- RGB/ENC switch (on the side panel) → RGB
- R/G/B switch (on the side panel) → G

Iris of the lens: CLOSE

Adjustment Procedures:

1. Set the waveform monitor as follows.
   - LUM mode
2. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
3. Set the menu as follows, and adjust the black level by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Black [M]
   Specifications: A = 3 ±1 IRE (for NTSC)
   A = 21 ±7 mV (for PAL)



(Waveform Monitor)

3. Set the RGB/ENC switch (on the side panel) to ENC.
4. Adjust the auto black balance.
   AUTO W/B BAL switch (on the front panel) → BLK

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

5-16. Gamma Correction Adjustment

Equipment : Waveform/Vector monitor
Test Point : TEST OUT connector
Object : Grayscale chart

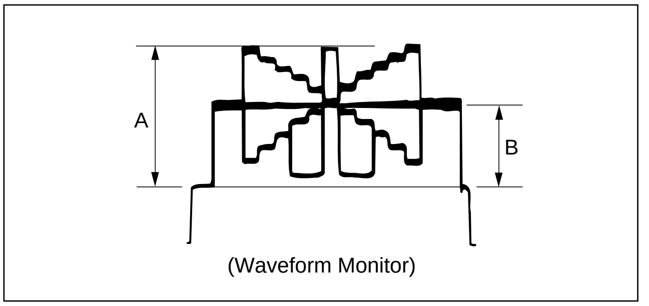
Preparations:

- Connect the waveform/vector monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → RGB
- R/G/B switch (on the side panel) → G
- Set the DISP switch (on the side panel) to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : Gamma (P5)
  ITEM : Gamma → On
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

Iris of the lens : A = 100 ±2 IRE (for NTSC)
A = 700 ±14 mV (for PAL)

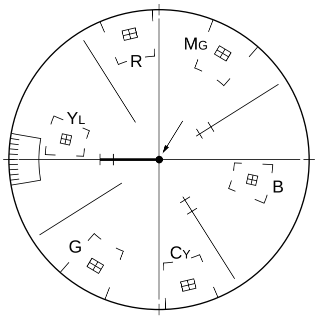
Adjustment Procedures:

1. Set the menu as follows, and adjust the gamma correction for (M) by using the MENU SEL switch.
   PAGE : Video Level (P1)
   ITEM : Gamma [M]
   Specifications: B = 58 ±2 IRE (for NTSC)
   B = 420 ±14 mV (for PAL)

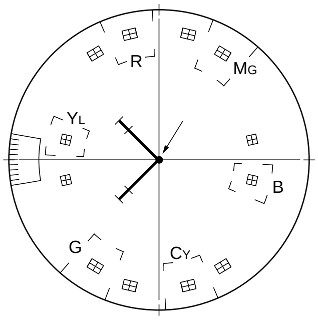


(Waveform Monitor)

2. Set the menu as follows.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Test → 1
3. Set the RGB/ENC switch (on the side panel) to ENC.
4. Adjust the auto white balance.
   WHITE BAL switch (on the side panel) → A
   AUTO W/B BAL switch (on the front panl) → WHT
5. Set the menu as follows, and adjust the gamma correction for (R) by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Gamma [R]
   Specifications: Center the beam spot on the vector monitor.
6. Set the menu as follows, and adjust the gamma correction for (B) by using the MENU SEL switch.
   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Gamma [B]
   Specifications: Center the beam spot on the vector monitor.
7. Repeat the steps 5 and 6 alternately, until the beam spot is minimized on the vector monitor.

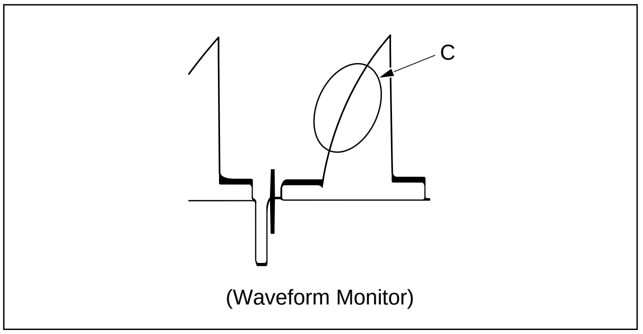


(For NTSC)



(For PAL)

9. Confirm that the carrier leakage does not monitored at portion C on the waveform monitor.
   Specifications: C = Minimum



(Waveform Monitor)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- Set the menu as follows.
  MENU : Paint
  PAGE : Video Level (P1)
  ITEM : Test → Off
- WHITE BAL switch (on the side panel) → PRST

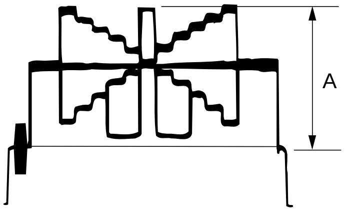
5-17. Flare Adjustment

Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Grayscale chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the grayscale chart so that the chart frame is aligned with the underscanned monitor frame.
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Knee → Off

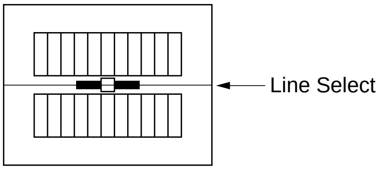
Iris of the lens : A = 100 ±2 IRE (for NTSC)
A = 700 ±14 mV (for PAL)



(Waveform Monitor)

Adjustment Procedures:

1. Adjust the auto white balance.
   WHITE BAL switch (on the side panel) → A
   AUTO W/B BAL switch (on the front panel) → WHT
2. Open the iris control of the lens by two stops against the reference setup (corresponding above A).
3. Set the RGB/ENC switch (on the side panel) to RGB.
   Set the R/G/B switch (on the side panel) to G.
4. Select the 15 lines in the center of the monitor screen by using the 15 LINE SELECT on the waveform monitor.



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5. Confirm that the level at portion B does not fluctuate even if the flare turns On/Off. If fluctuates, turn Flare On and adjust by Flare (G).

   Menu Setting:

   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Flare → On/Off

   Adjustment Point:

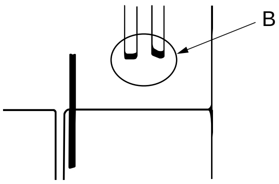
   ITEM : Flare [G]

6. Set the ENC/RGB switch (on the side panel) to ENC.
7. Set the menu as follows, and adjust the flare for R by using the MENU SEL switch.

   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Flare [R]
   Specifications: Minimize the carrier leakage.

8. Set the menu as follows, and adjust the flare for B by using the MENU SEL switch.

   MENU : Paint
   PAGE : Video Level (P1)
   ITEM : Flare [B]
   Specifications: Minimize the carrier leakage.



(Waveform Monitor)

9. Repeat the steps 7 and 8 alternately, until the carrier leakage is minimized.

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Resetting after Adjustment:

- WHITE BAL switch (on the side panel) → PRST

5-18. Pre Knee Adjustment

Equipment : Oscilloscope, Waveform monitor

Preparation:

- Extend VA-163A board with EX-464 board.

Iris of the lens : CLOSE

Adjustment Procedures:

1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows.

   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Knee → On

3. Set the RGB/ENC switch (on the side panel) to ENC.
4. Set the GAIN switch (on the side panel) to M (9 dB).
5. Set the WHITE BAL switch (on the side panel) to PRST.
6. Set the menu as follows.

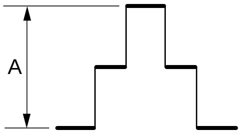
   MENU : System config
   PAGE : PreKnee/Zebra (S4)
   ITEM : Test → 2

7. Set the menu as follows, and adjust the pre knee 1 for G by using the MENU SEL switch.

   Test Point : TP52 (GND:GND (A))/ Extension board (extending VA-163A)

   Adjustment Point:

   MENU : System config
   PAGE : PreKnee/Zebra (S4)
   ITEM : PreKnee1[G]
   Specification : A = 1.80 ±0.01 V p-p

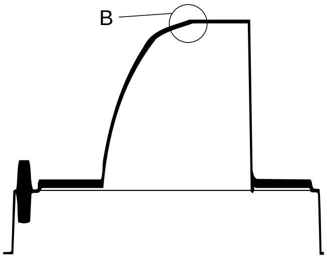


(Oscilloscope)

8. Set the menu as follows.
   MENU : System config
   PAGE : PreKnee/Zebra (S4)
   ITEM : Test → 1

   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Auto Knee → On
   ITEM : mode → nor

9. Set the GAIN switch (on the side panel) to H (18dB). Set the OUTPUT/DCC switch (on the side panel) to CAM/ON.
10. Set the menu as follows, and adjust the pre knee 1 for R by using the MENU SEL switch.
   Test Point : TEST OUT connector
   Adjustment Point:
   MENU : System config
   PAGE : PreKnee/Zebra (S4)
   ITEM : PreKnee1[R]
   Specification : Minimize the carrier leakage B.
11. Set the menu as follows, and adjust the pre knee 1 for B by using the MENU SEL switch.
   Test Point : TEST OUT connector
   Adjustment Point:
   MENU : System config
   PAGE : PreKnee/Zebra (S4)
   ITEM : PreKnee1[B]
   Specification : Minimize the carrier leakage B.



(Waveform Monitor)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.
MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

Resetting after Adjustment:

- Set the menu as follows.
  MENU : System config
  PAGE : PreKnee/Zebra (S4)
  ITEM : Test → Off

  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Auto Knee → Off

- GAIN switch (on the side panel) → L (0 dB)

5-19. Knee and White Clip Adjustment

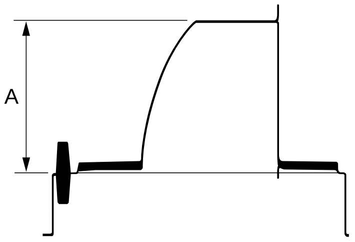
Equipment : Waveform monitor
Test Point : TEST OUT connector

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- OUTPUT/DCC switch (on the side panel) → CAM/OFF
- RGB/ENC switch (on the side panel) → ENC
- WHITE BAL switch (on the side panel) → PRST
- GAIN switch (on the side panel) → M(9 dB)

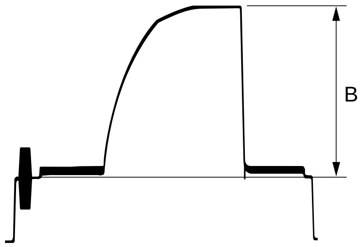
Adjustment Procedures:

1. Confirm the black level is 3 IRE for NTSC and 21 mV for PAL.
2. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
3. Set the menu as follows, and adjust the knee point level by using the MENU SEL switch.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Test → 1
   ITEM : W.Clip. → Off
   ITEM : Knee → On
   ITEM : Knee Max → On
   Adjustment Point:
   ITEM : Point
   Specifications: A = 92 ± 2 IRE (for NTSC)
   A = 672 ± 10 mV (for PAL)



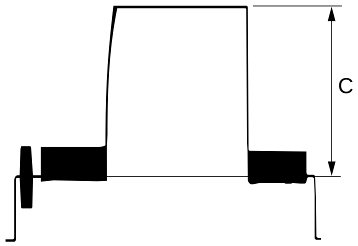
(Waveform Monitor)

4. Set the menu as follows, and adjust the knee slope level by using the MENU SEL switch.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : Knee Max → Off
   Adjustment Point:
   ITEM : Slope
   Specifications: B = 105 ± 2 IRE (for NTSC)
   B = 750 ± 10 mV (for PAL)



(Waveform Monitor)

5. Set the GAIN switch (on the side panel) to H (18 dB).
6. Set the menu as follows, and adjust the white clip level by using the MENU SEL switch.
   MENU : Paint
   PAGE : W.Clip/Knee (P6)
   ITEM : W.Clip. → On
   Adjustment Point:
   ITEM : W.Clip.
   Specifications: C = 105 ± 2 IRE (for NTSC)
   C = 735 ± 10 mV (for PAL)



(Waveform Monitor)

Resetting after Adjustment:

- Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Test → Off
- GAIN switch (on the side panel) → L (0 dB).

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store

Note:

The values used in the above adjustments are under the conditions that the white clip level is set to 105 IRE (for NTSC) or 735 mV (for PAL).

When the white clip level is set to other value than 105 IRE or 735 mV, use the following table to set the levels of the knee point and knee slope.

	White Clip Level (Unit: IRE/mV)			
	109/763	107/749	105/735	103/721
Knee point	98/686	98/686	92/672	92/672
Knee slope	109/763	109/763	105/750	105/750
White clip	109/763	107/749	105/735	103/721

5-20. A/D Clock Phase Adjustment

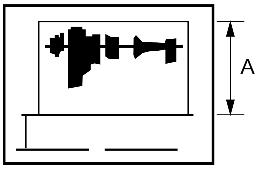
Equipment : Waveform monitor
Test Point : TEST OUT connector
Object : Multiburst chart

Preparations:

- Connect the waveform monitor to the TEST OUT connector.
- Shoot the multiburst chart so that the chart frame is aligned with the underscanned monitor frame with the zoom control.
- Pan so that the 9 MHz portion of the multiburst chart is positioned at the center of the monitor screen.
- OUTPUT/DCC switch (on the side panel) → CAM/OFF
- RGB/ENC switch (on the side panel) → ENC
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : Paint
  PAGE : W.Clip/Knee (P6)
  ITEM : Auto Knee → On

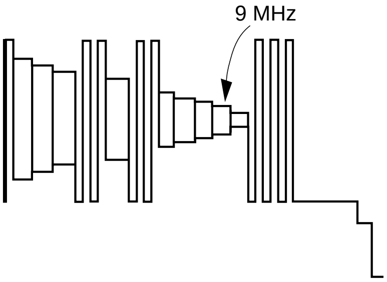
Adjustment Procedures:

1. **Iris of the lens**: A = 90 ± 2 IRE (for NTSC)
   A = 630 ± 10 mV (for PAL)



(Waveform Monitor)

2. Set the menu as follows, and adjust the clock phase for G by using the MENU SEL switch.
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : G Clock
   Specifications: Maximize the 9 MHz signal portion.
3. Set the menu as follows, and adjust the clock phase for R/B by using the MENU SEL switch.
   MENU : System config
   PAGE : PR/VA/Test (S3)
   ITEM : R/B Clock
   Specifications: Minimize the aliasing around the 9 MHz signal portion.



(Waveform Monitor)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

5-21. VTR R-Y/B-Y Adjustment

Equipment : Oscilloscope

Preparation:

- OUTPUT/DCC switch (on the side panel) → BARS (Refer to Section 5-1-7 "How to Output Camera Color-Bar Signal")

Adjustment Procedures:

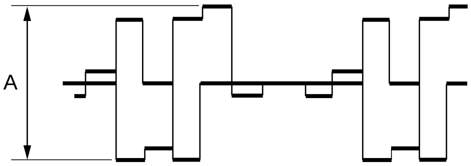
1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows, and adjust the VTR R-Y by using the MENU SEL switch.

Test Point : TP4 (R-Y) (GND:E1)/
DA-88A panel

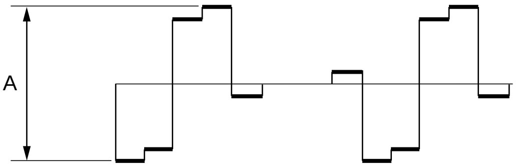
Adjustment Point:

MENU : System config
PAGE : VTR/CCU (S5)
ITEM : VTR R-Y

Specifications: A = 700 ±5 mV (for NTSC)
: A = 525 ±5 mV (for PAL)



(For NTSC)



(For PAL)

(Oscilloscope)

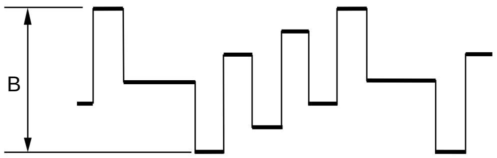
3. Set the menu as follows, and adjust the VTR B-Y by using the MENU SEL switch.

Test Point : TP5 (B-Y) (GND:E1)/
DA-88A panel

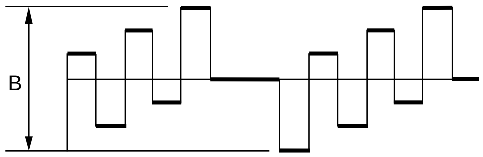
Adjustment Point:

MENU : System config
PAGE : VTR/CCU (S5)
ITEM : VTR B-Y

Specifications: B = 700 ±5 mV (for NTSC)
: B = 525 ±5 mV (for PAL)



(For NTSC)



(For PAL)

(Oscilloscope)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

5-22. CCU Y/R-Y/B-Y Adjustment

Equipment : Oscilloscope

Preparation:

- Connect the CCU to the camera.

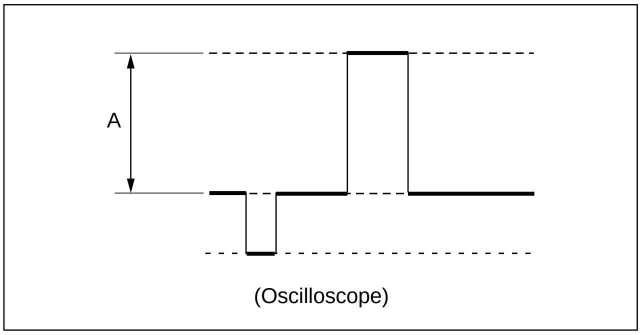
Adjustment Procedures:

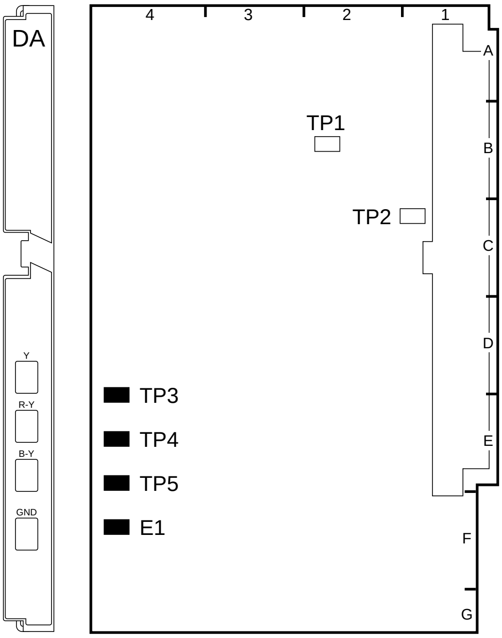
1. Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel).
2. Set the menu as follows, and adjust the CCU Y sample by using the MENU SEL switch.

Test Point : TP3 (Y) (GND:E1)/ DA-88A panel

Adjustment Point:

MENU : System config
PAGE : VTR/CCU (S5)
ITEM : CCU Y SAMP
Specifications: A = 700 ± 2 mV





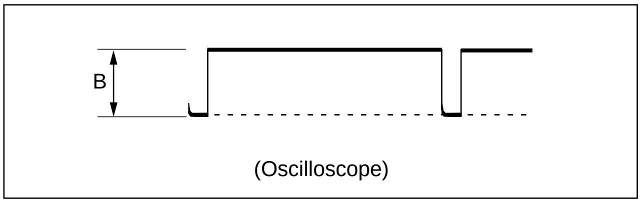
DA-88A BOARD (A SIDE)

3. Set the menu as follows, and adjust the CCU R-Y sync by using the MENU SEL switch.

Test Point : TP4 (R-Y) (GND:E1)/ DA-88A panel

Adjustment Point:

MENU : System config
PAGE : VTR/CCU (S5)
ITEM : CCU R-Y SYNC
Specifications: B = 350 ±2 mV

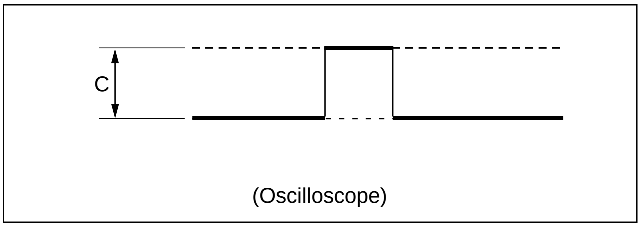


4. Set the menu as follows, and adjust the CCU B-Y by using the MENU SEL switch.

Test Point : TP5 (B-Y) (GND:E1)/ DA-88A panel

6. **Adjustment Point**:

MENU : System config
PAGE : VTR/CCU (S5)
ITEM : CCU B-Y SAMP
Specifications: C = 350 ±2 mV



File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

5-23. RGB Adjustment

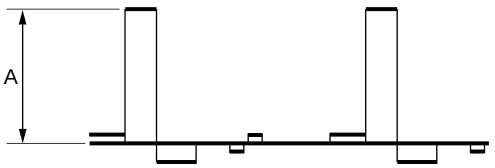
Equipment : Oscilloscope

Preparations:

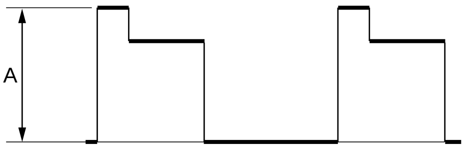
- Extend IF-510 board with EX-464 board.
- Set the DISP switch (on the side panel) from OFF to MENU while holding down the MENU SEL switch (on the front panel). Set the menu as follows.
  MENU : System config
  PAGE : VTR/CCU (S5)
  ITEM : CB → On

Adjustment Procedures:

1. Set the menu as follows, and adjust the G video level by using the MENU SEL switch.
   Test Point : TP61 (GND:GND (A))/
   Extension board (extending IF-510)
   Adjustment Point:
   MENU : System config
   PAGE : VTR/CCU (S5)
   ITEM : RGB Offset
   Specifications: A = 700 ±5 mV



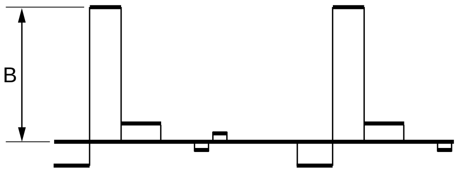
(For NTSC)



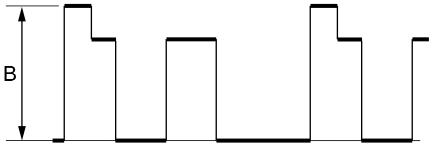
(For PAL)

(Oscilloscope)

2. Confirm the R video level.
   Test Point : TP63 (GND:GND (A))/
   Extension board (extending IF-510)
   Specifications:B = 700 ±7 mV



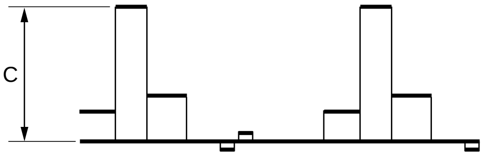
(For NTSC)



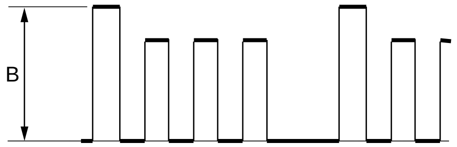
(For PAL)

(Oscilloscope)

3. Confirm the B video level.
   Test Point : TP59 (GND:GND (A))/
   Extension board (extending IF-510)
   Specifications: C = 700 ±7 mV



(For NTSC)



(For PAL)

(Oscilloscope)

File Store:

Execute the file store. Press the MENU SEL switch twice to execute.

MENU : Trimming File
PAGE : Trimming File (T1)
ITEM : File Store

5-24. Menu Setting After Finishing Adjustment

MENU : Paint
PAGE : Detail1 (P2)
ITEM : Detail → On
PAGE : Gamma (P5)
ITEM : Gamma → On
PAGE : W.Clip/Knee (P6)
ITEM : Knee → On
MENU : System config
PAGE : VTR/CCU (S5)
ITEM : CB→Off
MENU : Reference File
PAGE : Reference File (R1)
ITEM : File Store
(Press the MENU SEL switch twice to execute.)

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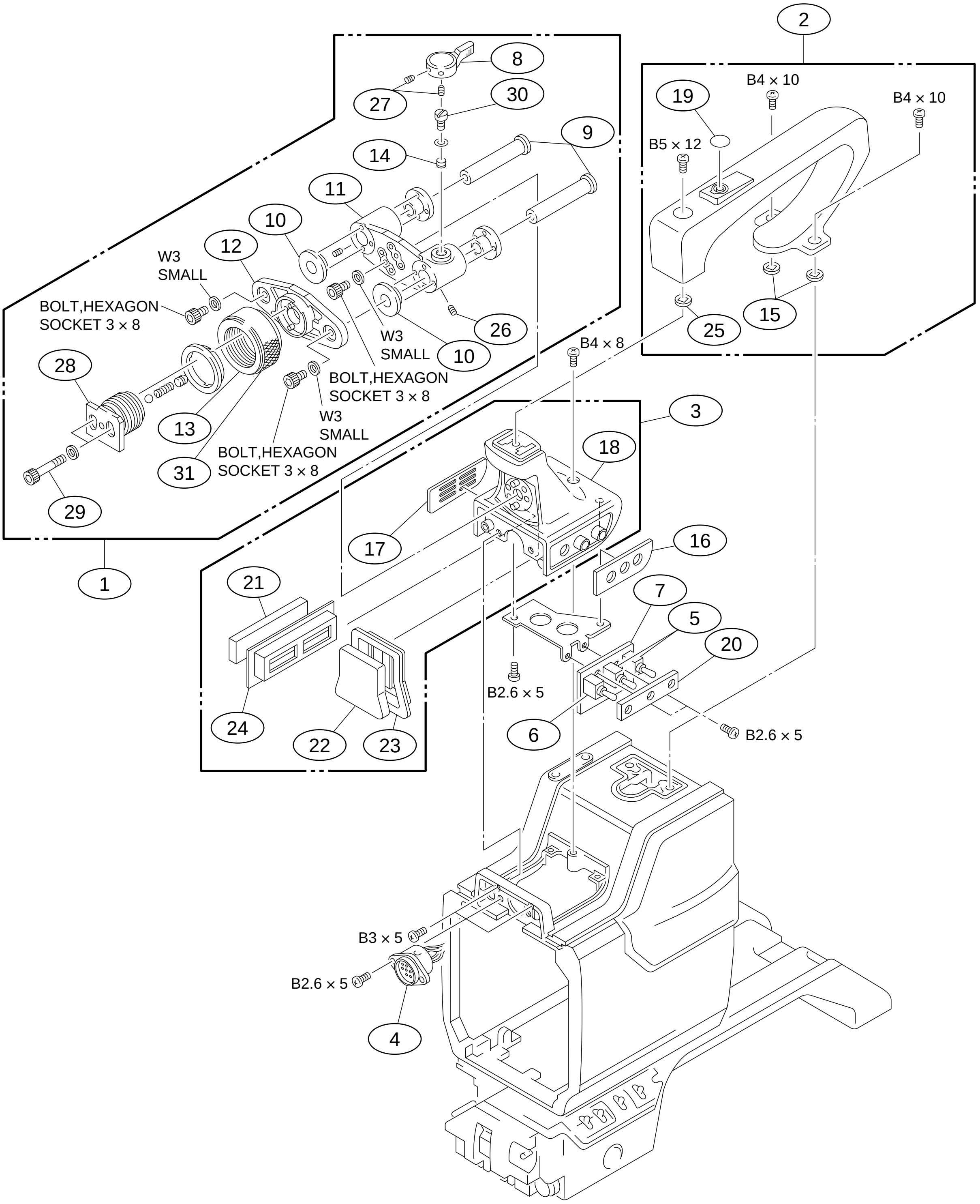
Section 6
Spare Parts

6-1. Hardware List

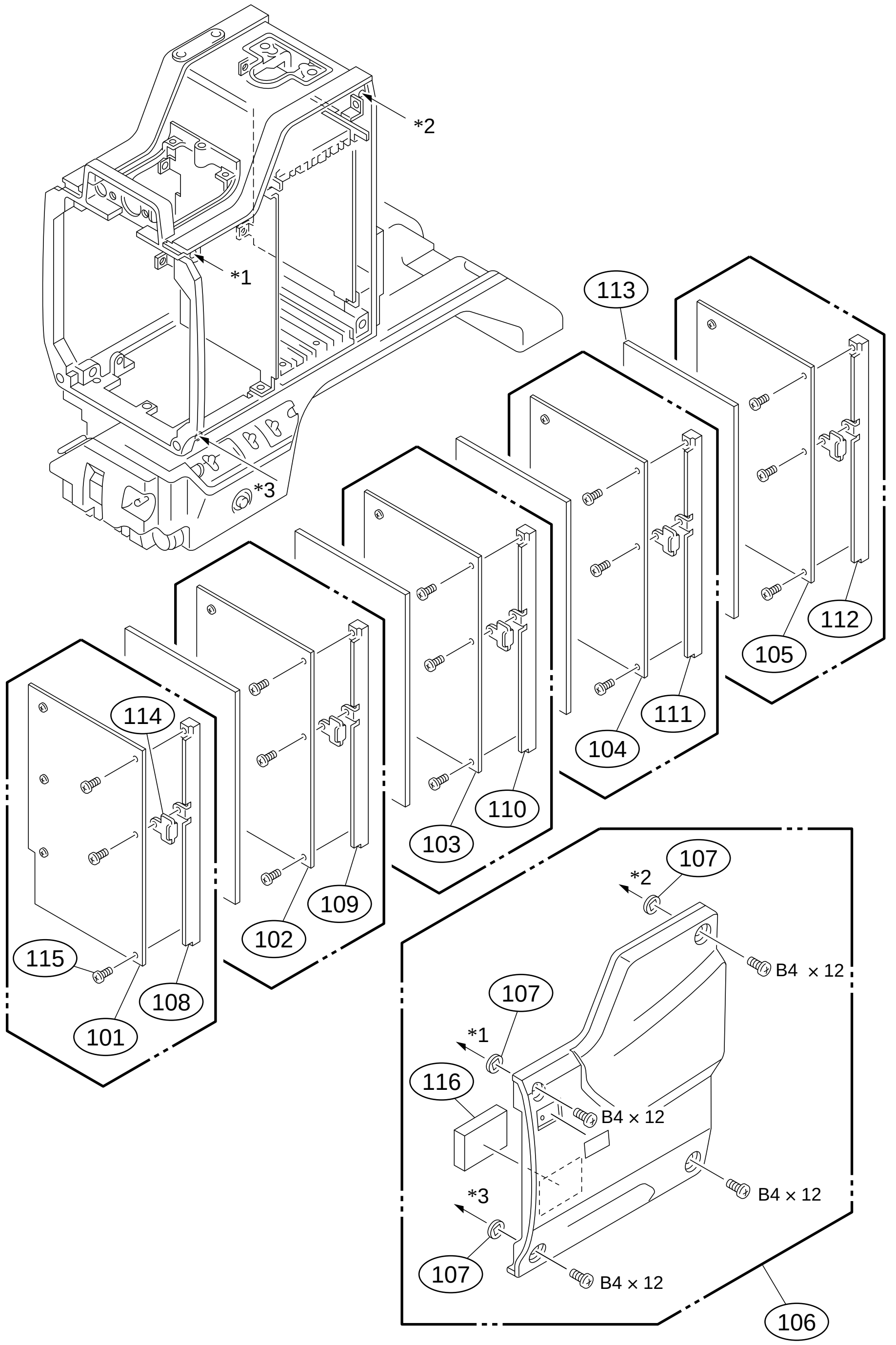
Part No.	SP	Description
7-621-770-87	s	SCREW +B 2.6X5
7-622-207-05	s	NUT 2.6 TYPE2
7-623-208-22	o	SW 3, TYPE 2
7-623-505-01	s	LUG, 2
7-624-104-04	s	STOP RING 2.0, TYPE -E
7-624-105-04	s	STOP RING 2.3, TYPE -E
7-624-200-01	s	NUT, PUSH 1.5
7-627-452-38	s	SCREW,PRECISION +K 2X5
7-627-454-38	s	SCREW, PRECISION +K 2.6X5
7-627-553-78	s	SCREW,PRECISION +P 2X10
7-627-554-18	s	SCREW,PRECISION +P 2X3.5 TYPE1
7-627-556-57	s	PRECISION SCREW +P 2.6X5 TYPE1
7-627-556-58	s	PRECISION SCREW +P 2.6X5 (BLACK)
7-671-158-01	s	BALL, STAINLESS (2.5 DIA)
7-682-160-09	s	SCREW +P 4X6
7-682-247-04	s	SCREW +K 3X6
7-682-248-09	s	SCREW +K 3X8
7-682-261-09	s	SCREW +K 4X8
7-682-545-04	s	SCREW +B 3X4
7-682-546-04	s	SCREW +B 3X5 (SILVER)
7-682-546-09	s	SCREW +B 3X5 (BLACK)
7-682-561-09	s	SCREW +B 4X8
7-682-563-09	s	SCREW +B 4X12
7-682-564-09	s	SCREW +B 4X14
7-682-576-09	s	SCREW +B 5X12
7-683-404-04	s	BOLT,HEXAGON SOCKET 3X8
7-683-405-04	s	BOLT,HEXAGON SOCKET 3X10
7-683-412-05	s	BOLT,HEXAGON SOCKET 2.6X6
7-685-104-19	s	SCREW +P 2X6 TYPE2 NON-SLIT
7-685-134-19	s	SCREW +P 2.6X8 TYPE2 NON-SLIT
7-685-533-19	s	SCREW +BTP 2.6X6 TYPE2 N-S
7-688-002-02	s	W2.6, SHALL
7-688-003-02	s	W 3, SMALL

6-2. Exploded Views


2
8
27
30
9
14
11
10
12
W3
SMALL
BOLT,HEXAGON
SOCKET 3 × 8
28
13
31
29
1
26
W3
SMALL
10
BOLT,HEXAGON
SOCKET 3 × 8
W3
SMALL
BOLT,HEXAGON
SOCKET 3 × 8
19
B4 × 10
B4 × 10
B5 × 12
25
15
B4 × 8
3
18
17
16
21
7
5
20
B2.6 × 5
6
B2.6 × 5
24
22
23
B3 × 5
B2.6 × 5
4

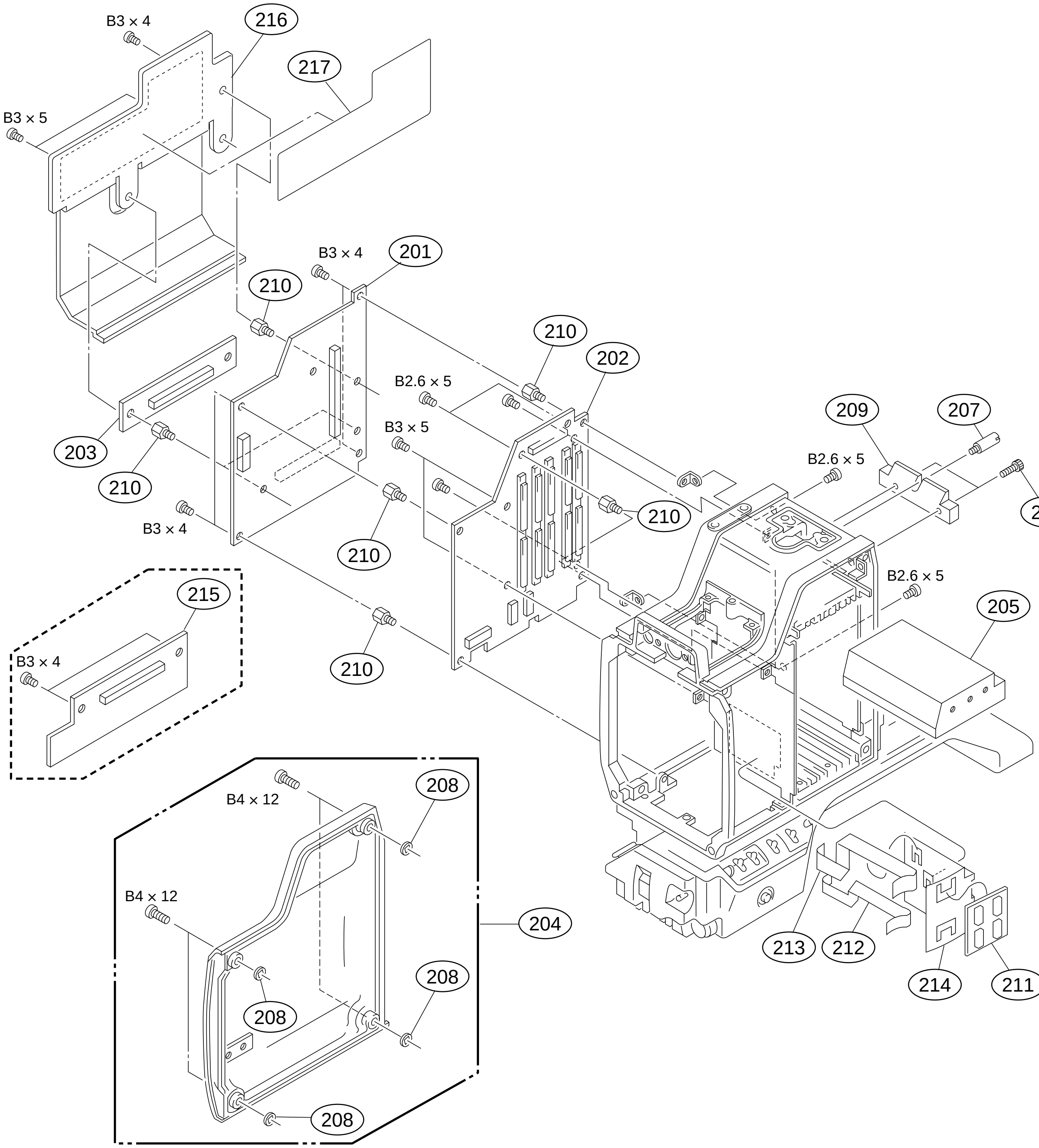
No.	Part No.	SP	Description
1	A-8278-029-B	o	SLIDE ASSY,VF
2	X-3678-451-3	o	HANDLE ASSY
3	X-3678-484-1	o	HOLDER SUB ASSY,HANDLE
4	1-565-051-21	o	CONNECTOR 20P, FEMALE “VF”
5	1-570-985-11	s	SWITCH TOGGLE “R/G/B” “ENC/RGB”
6	1-571-396-11	s	SWITCH TOGGLE “DIPS ON/OFF/MENU”
7	1-657-442-22	o	PRINTED CIRCUIT BOARD, SW-732
8	3-673-046-00	s	LEVER, LOCK
9	3-679-683-01	o	ARM,SLIDE
10	3-679-684-01	o	REST,ARM
11	3-679-685-01	o	TABEL,FIXED,VF SLIDE
12	3-679-686-01	o	TABEL,FIXED,VF SHOE
13	3-679-698-01	o	RING(C),LOCK
14	3-679-702-01	o	CUSION,STOPPER
15	3-687-116-01	o	WASHER(4), STOPPER
16	3-692-112-01	o	PLATE,MENU
17	3-692-150-01	o	SHEET,DROP PROTECTION
18	3-692-165-01	o	HOLDER,HANDOLE
19	3-692-649-01	s	SHEET, BLIND
20	3-693-984-01	s	CUSSHION, DROP PROTECTION (3)
21	3-694-196-01	s	SHEET, DUST PROTECTION (S)
22	3-694-197-01	o	SHEET, DUST PROTECTION (F)
23	3-694-198-01	s	RETAINER, DROP PROTECTION (F)
24	3-694-199-01	s	RETAINER DROP, PROTECTION (S)
25	3-701-442-21	s	WASHER, 4.5
26	3-701-506-01	s	SET SCREW, DOUBLE POINT 3X4
27	3-701-508-00	s	SET SCREW, DOUBLE POINT 3X6
28	3-710-039-03	s	SHOE, SLIDE
29	3-711-765-01	s	BOLT (M3), HEXAGON SOCKET
30	3-711-794-01	o	PIN, STOPPER
31	3-720-919-01	o	RUBBER, LOCK RING

Right Panel and Plug-in Boards


*2
*1
*3
113
112
105
111
104
110
103
109
102
114
115
108
101
107
*2
B4 × 12
107
*1
116
B4 × 12
*3
B4 × 12
107
B4 × 12
106

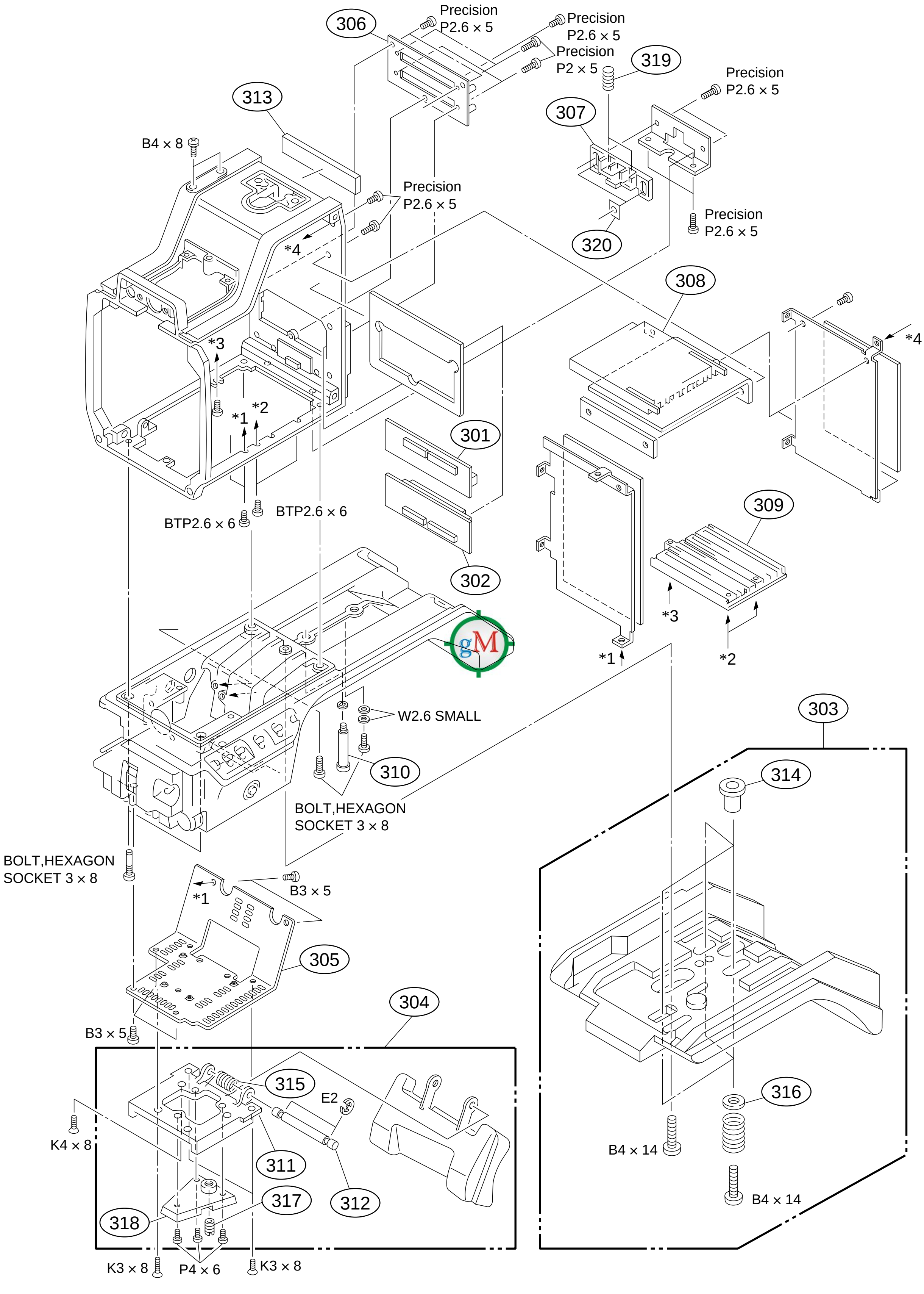
No.	Part No.	SP	Description
101	A-8319-646-A	o	MOUNTED CIRCUIT BOARD, VA-163A
102	A-8319-228-A	o	MOUNTED CIRCUIT BOARD, AT-126
103	A-8272-564-A	o	MOUNTED CIRCUIT BOARD, SG-234
104	A-8319-647-A	o	MOUNTED CIRCUIT BOARD, DA-88A
105	A-8272-568-A	o	MOUNTED CIRCUIT BOARD, IF-510
106	X-3678-480-2	o	PANEL ASSY, RIGHT
107	3-687-116-01	o	WASHER (4), STOPPER
108	3-692-125-02	o	PANEL,VA-163 PC BOARD
109	3-692-126-02	o	PANEL,AT-95 PC BOARD
110	3-692-127-02	o	PANEL,SG-234 PC BOARD
111	3-692-128-02	o	PANEL,DA-88 PC BOARD
112	3-692-129-02	o	PANEL,IF-510 PC BOARD
113	3-692-642-01	o	SHEET,SHIELD
114	3-724-753-01	o	RING
115	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
116	3-693-982-01	o	CUSHION (MPX)

Left Panel and Boards

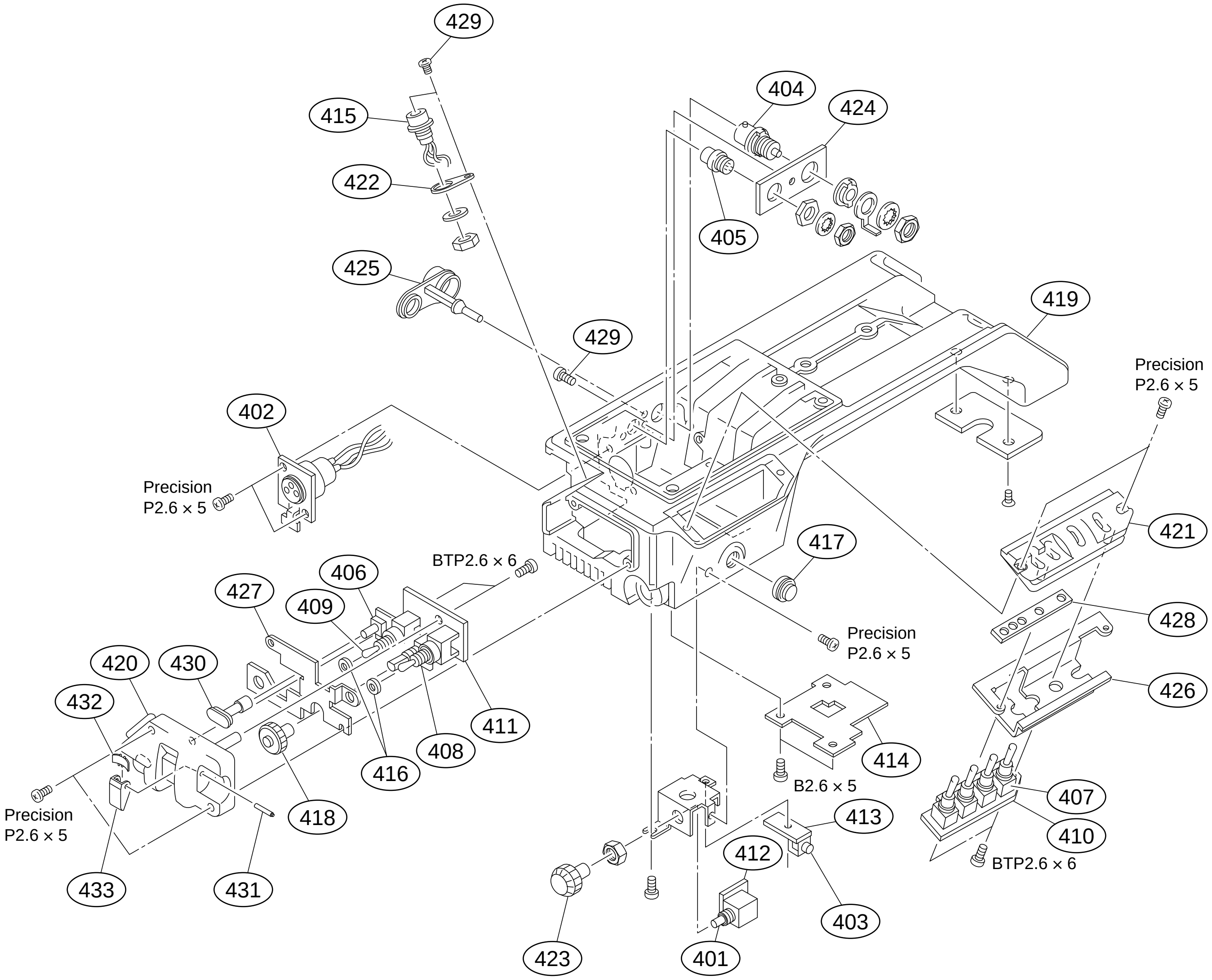

B3 × 4
216
217
B3 × 5
B3 × 4
201
210
210
202
B2.6 × 5
B3 × 5
209
207
B2.6 × 5
206
203
210
210
B3 × 4
210
B2.6 × 5
205
215
B3 × 4
210
208
B4 × 12
B4 × 12
204
213
212
214
211
208
208
208

No.	Part No.	SP	Description
201	A-8319-224-A	o	MOUNTED CIRCUIT BOARD, PR-242
202	A-8272-547-A	o	MOUNTED CIRCUIT BOARD, MB-602
203	A-8319-233-A	o	MOUNTED CIRCUIT BOARD, CN-1672
204	X-3604-648-1	o	PANEL ASSY, LEFT
205	A-8272-571-A	s	CONVERTER ASSY, DC-DC
206	2-623-773-11	s	BOLT (M3X8), STAINLESS
207	3-168-296-01	s	PIN, ID
208	3-687-116-01	o	WASHER (4), STOPPER
209	3-692-113-12	o	WEDGE,HANGER
210	4-924-260-01	o	BOSS (D)
211	A-8315-489-A	o	MOUNTED CIRCUIT BOARD, CN-1504
212	1-782-697-11	o	CABLE FLEXIBLE FLAT (20 CORE)
213	1-782-698-11	o	CABLE FLEXIBLE FLAT (24 CORE)
214	3-608-926-01	o	SUPPORT, PC BOARD
215	WIDE SCREEN DSP BOARD : BKP-5091 (PR-243 BOARD)		
216	3-617-656-01	o	LSI, HEATSINK
217	3-617-657-01	o	SHEET, RADIATION (A)

Chassis and Shoulder Pad


306
Precision
P2.6 × 5
Precision
P2.6 × 5
Precision
P2 × 5
319
Precision
P2.6 × 5
313
307
B4 × 8
Precision
P2.6 × 5
*4
Precision
P2.6 × 5
320
308
*4
*3
*2
*1
301
BTP2.6 × 6
BTP2.6 × 6
309
302
*3
*1
*2
W2.6 SMALL
303
310
314
BOLT,HEXAGON
SOCKET 3 × 8
BOLT,HEXAGON
SOCKET 3 × 8
B3 × 5
*1
305
304
B3 × 5
315
E2
316
K4 × 8
B4 × 14
311
B4 × 14
317
312
318
K3 × 8
P4 × 6
K3 × 8

No.	Part No.	SP	Description
301	A-8272-549-A	o	MOUNTED PCB, CN-1120
302	A-8272-550-A	o	MOUNTED PCB, CN-1121
303	A-8278-237-B	s	PAD ASSY (LARGE)
304	A-8278-238-B	s	PAD ASSY (SMALL)
305	3-692-102-12	o	BRACKET V SHOE
306	3-692-114-02	o	PLATE,CONNECTOR(136P)
307	3-692-115-12	o	SHOE,LOCK
308	3-692-117-02	o	RAIL
309	3-692-119-01	o	RAIL,CAM
310	3-692-641-03	o	ROD,LOCK
311	3-692-643-02	o	BASE,V SHOE
312	3-692-645-01	o	ROD,ROTARY
313	3-692-646-01	o	SHEET,DUST PROTECTION (PS)
314	3-692-647-01	o	SPACER,PAD
315	3-693-973-01	s	SPRING, TORSION (SMALL)
316	3-701-444-21	s	WASHER, 6
317	3-742-011-01	s	SCREW, 1/4, 3/8 CONVERSION
318	3-742-015-01	o	WEDGE (B), MOUNTING
319	4-864-521-01	s	SPRING (PC BOARD GROUND)
320	3-604-691-01	o	SHEET,LUBRICATION (LOCK)


Precision
P2.6 × 5
Precision
P2.6 × 5
BTP2.6 × 6
Precision
P2.6 × 5
B2.6 × 5
Precision
P2.6 × 5
BTP2.6 × 6

No.	Part No.	SP	Description
401	1-473-315-21	s	ENCODER ROTARY “MENU SEL”
402	1-509-184-51	s	CONNECTOR 3P, FEMALE “MIC”
403	1-554-088-00	s	SWITCH, TACTILE “CANCEL”
404	1-561-781-91	s	CONNECTOR, BNC “TEST OUT”
405	1-562-222-41	s	CONNECTOR 6P, FEMALE “REMOTE”
406	1-570-282-21	s	SWITCH KEY BOARD “VTR START”
407	1-571-415-11	s	SWITCH TOGGLE “CAMERA/VTR” “GAIN” “OUTPUT” WHITE BAL”
408	1-571-416-11	s	SWITCH TOGGLE “AUTO W/B BAL”
409	1-571-679-11	s	SWITCH TOGGLE “SHUTTER”
410	1-657-443-21	o	PRINTED CIRCUIT BOARD, SW-730
411	1-657-444-21	o	PRINTED CIRCUIT BOARD, SW-731
412	1-657-445-21	o	PRINTED CIRCUIT BOARD, SW-733
413	1-657-446-21	o	PRINTED CIRCUIT BOARD, SW-742
414	1-657-447-21	o	PRINTED CIRCUIT BOARD, CN-1122
415	1-695-841-12	s	CONNECTOR 12P, FEMALE “LENS”
416	3-312-823-00	s	PACKING, KNOB
417	3-676-244-00	s	COVER, SW
418	3-679-679-03	s	KNOB,VR(AUDIO)
419	3-692-106-12	o	BASE,SHOULDER
420	3-692-107-03	o	COVER,FRONT SWITCH
421	3-692-108-01	o	GUARD,SWITCH
422	3-692-110-02	o	BRACKET,CONNECTOR
423	3-692-111-01	s	KNOB,RE “MIC LEVEL”
424	3-692-149-02	o	BRACKET,CONNECTOR(TEST OUT)
425	3-692-644-03	o	CAP,CONNECTOR
426	3-693-974-01	o	PLATE, SHIELD (SIDE)
427	3-693-976-01	o	PLATE, SHUTTER (FRONT)
428	3-693-983-01	o	CUSSHION, DROP PROTECTION (2)
429	3-694-181-01	s	TYPE1, AROCK PRECISION +P2.6
430	3-729-069-01	s	BUTTON, VTR START
431	3-742-065-01	o	SHAFT, SHUTTER
432	3-742-066-11	o	SPRING, SHUTTER
433	3-742-067-04	o	LID, SHUTTER

6-3. Electrical Parts List

AT-126 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8319-228-A	o	MOUNTED CIRCUIT BOARD, AT-126
1pc	3-724-753-01	o	RING
6pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
1pc	3-692-126-02	o	PANEL,AT-95 PC BOARD
BT1	1-550-104-32	s	HOLDER, BATTERY
C1	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C2	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C3	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C4	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C5	1-107-688-11	s	TANTALUM, CHIP 1.5uF 20% 25V
C6	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C7	1-107-688-11	s	TANTALUM, CHIP 1.5uF 20% 25V
C8	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C9	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C10	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C11	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C12	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C13	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C14	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C15	1-104-905-11	s	DOUBLE LAYERS, 0.22F 5.5V
C16	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C17	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C18	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C19	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C20	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C21	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C22	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C23	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C24	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C25	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C26	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C27	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C28	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C29	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C30	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C31	1-135-180-21	s	TANTALUM, CHIP 33uF 10% 10V
C32	1-162-966-11	s	CERAMIC, CHIP 0.0022uF 10% 50V
C33	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C34	1-135-076-21	s	TANTALUM, CHIP 1uF 10% 35V
C35	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C36	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C37	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C38	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C39	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C40	1-135-085-21	s	TANTALUM, CHIP 4.7uF 10% 25V
C41	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C42	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C43	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C44	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C45	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C46	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C47	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C48	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C49	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C50	1-135-157-21	s	TANTALUM, CHIP 10uF 10% 6.3V
C51	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C52	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C53	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

(AT-126 Board)

Ref. No. or Q'ty	Part No.	SP	Description
C54	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C55	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C56	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C57	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C58	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C59	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C60	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C61	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C62	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C63	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C64	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C65	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C66	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C67	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C68	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C69	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C70	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C71	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C80	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C81	1-128-391-11	s	ELECT 330uF 20% 6.3V
C82	1-128-391-11	s	ELECT 330uF 20% 6.3V
CNI36	1-251-350-11	s	SOCKET, IC (PLCC) 32P
D1	8-719-029-63	s	DIODE RD4.3UH-T1
D2	8-719-820-41	s	DIODE 1SS302
D3	8-719-974-76	s	DIODE HSM107S
D4	8-719-974-76	s	DIODE HSM107S
D5	8-719-820-41	s	DIODE 1SS302
D6	8-719-974-76	s	DIODE HSM107S
D7	8-719-974-76	s	DIODE HSM107S
D8	8-719-974-76	s	DIODE HSM107S
D10	8-719-974-76	s	DIODE HSM107S
D11	8-719-974-76	s	DIODE HSM107S
D12	8-719-974-76	s	DIODE HSM107S
D13	8-719-974-76	s	DIODE HSM107S
D15	8-719-974-76	s	DIODE HSM107S
D16	8-719-820-41	s	DIODE 1SS302
D17	8-719-820-41	s	DIODE 1SS302
D18	8-719-820-41	s	DIODE 1SS302
D19	8-719-820-41	s	DIODE 1SS302
D20	8-719-820-41	s	DIODE 1SS302
IC1	8-759-252-59	s	IC MAX202CSE
IC2	8-759-242-78	s	IC TC7W02F
IC3	8-759-524-10	s	IC TC74VHC157FT(EL)
IC4	8-759-076-06	s	IC TL064CPW
IC5	8-759-076-06	s	IC TL064CPW
IC6	8-759-637-07	s	IC M62021FP
IC6	8-759-637-07	s	IC M62021FP
IC7	8-759-427-87	s	IC MC74HC4052DTR2
IC8	8-759-082-60	s	IC TC7S66FU
IC9	8-759-076-06	s	IC TL064CPW
IC11	8-759-906-53	s	IC TL062CPS BVP-570: S/N 15331 and higher BVP-570WSPK: S/N 55111 and higher
	8-759-711-50	s	IC NJU7022M BVP-570: S/N 15001-15330 BVP-570WSPK: S/N 55001-55110
IC12	8-759-711-50	s	IC NJU7022M

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Ref. No. or Q'ty	Part No.	SP	Description
IC13	8-759-059-50	s	IC MB88351PFV
IC14	8-759-082-57	s	IC TC7W04FU
IC15	8-759-083-94	s	IC TC7W74FU
IC17	8-759-058-64	s	IC TC7S32FU(TE85R)
IC18	8-759-271-84	s	IC TC7SH02FU
IC19	8-759-271-86	s	IC TC7SH04FU
IC20	8-759-196-96	s	IC TC7SH08FU-TE85R
IC21	8-759-271-84	s	IC TC7SH02FU
IC22	8-759-196-97	s	IC TC7SH32FU-TE85R
IC23	8-759-523-91	s	IC TC74VHC20FT(EL)
IC24	8-759-524-07	s	IC TC74VHC138FT(EL)
IC25	8-759-065-20	s	IC RTC-4553B
IC26	8-759-434-10	s	IC KM681000BLT-7L
IC27	8-759-154-60	s	IC UPD71055GB-10-3B4
IC28	8-759-154-60	s	IC UPD71055GB-10-3B4
IC29	8-759-149-10	s	IC UPD4702G
IC30	8-759-271-84	s	IC TC7SH02FU
IC31	8-759-196-97	s	IC TC7SH32FU-TE85R
IC32	8-759-242-78	s	IC TC7W02F
IC33	8-759-524-18	s	IC TC74VHC163FT(EL)
IC34	8-759-524-18	s	IC TC74VHC163FT(EL)
IC35	8-759-277-99	s	IC CXD8889R
IC36	8-759-585-23	o	IC 290F040-BVP570-V1.01
IC37	8-759-196-96	s	IC TC7SH08FU-TE85R
IC38	8-759-182-95	s	IC HD151015T
IC39	8-759-524-27	s	IC TC74VHC244FT(EL)
IC40	8-759-523-95	s	IC TC74VHC74FT(EL)
IC41	8-759-195-81	s	IC TC7S86FU
IC42	8-759-524-18	s	IC TC74VHC163FT(EL)
IC43	8-759-082-57	s	IC TC7W04FU
IC44	8-759-524-18	s	IC TC74VHC163FT(EL)
IC45	8-759-083-94	s	IC TC7W74FU
IC46	8-759-165-37	s	IC X24164SIC7000
IC47	8-759-078-75	s	IC UPD6453GT-610
IC48	8-759-276-00	s	IC TC7W139FU(TE12R)
L1	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L2	1-410-377-31	s	INDUCTOR, CHIP 4.7uH
Q1	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q2	8-729-402-19	s	TRANSISTOR XN6501
Q3	8-729-920-48	s	TRANSISTOR IMH2
Q4	8-729-925-47	s	TRANSISTOR IMB2
Q5	8-729-920-48	s	TRANSISTOR IMH2
Q6	8-729-920-48	s	TRANSISTOR IMH2
R1	1-216-794-11	s	METAL, CHIP 5.6 5% 1/16W
R2	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R3	1-216-831-11	s	METAL, CHIP 6.8K 5% 1/16W
R4	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R5	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R6	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R7	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R8	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R9	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R10	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R11	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R12	1-216-794-11	s	METAL, CHIP 5.6 5% 1/16W
R13	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R14	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R15	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R16	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R17	1-216-858-11	s	METAL, CHIP 1.2M 5% 1/16W
R18	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R19	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R20	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R21	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R22	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R23	1-216-794-11	s	METAL, CHIP 5.6 5% 1/16W
R25	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R26	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R28	1-218-734-11	s	METAL, CHIP 56K 5% 1/16W
R29	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R30	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R31	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R32	1-216-839-11	s	METAL, CHIP 33K 5% 1/16W
R33	1-216-862-11	s	METAL, CHIP 2.7M 5% 1/16W
R34	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R35	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R36	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R37	1-216-863-11	s	METAL, CHIP 3.3M 5% 1/16W
R38	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R39	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R40	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R41	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R42	1-216-819-11	s	METAL, CHIP 680 5% 1/16W
R43	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R44	1-218-707-11	s	METAL, CHIP 4.3K 0.50% 1/16W
R45	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R46	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R47	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R48	1-218-718-11	s	METAL, CHIP 12K 0.50% 1/16W
R49	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R50	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R51	1-216-864-11	s	METAL, CHIP 0 5% 1/16W BVP-570: S/N 15331 and higher BVP-570WSPK: S/N 55111 and higher
	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W BVP-570: S/N 15001-15330 BVP-570WSPK: S/N 55001-55110
R52	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R53	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R54	1-216-836-11	s	METAL, CHIP 18K 5% 1/16W
R55	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R56	1-216-824-11	s	METAL, CHIP 1.8K 5% 1/16W
R57	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R58	1-218-718-11	s	METAL, CHIP 12K 0.50% 1/16W
R59	1-216-820-11	s	METAL, CHIP 820 5% 1/16W
R60	1-216-855-11	s	METAL, CHIP 680K 5% 1/16W
R61	1-216-854-11	s	METAL, CHIP 560K 5% 1/16W
R62	1-218-752-11	s	METAL, CHIP 330K 0.50% 1/16W
R63	1-216-854-11	s	METAL, CHIP 560K 5% 1/16W
R64	1-218-750-11	s	METAL, CHIP 270K 0.50% 1/16W
R66	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R70	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R71	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R72	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R73	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R74	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R75	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R76	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R77	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R78	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R79	1-216-828-11	s	METAL, CHIP 3.9K 5% 1/16W
R80	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R81	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R82	1-218-711-11	s	METAL, CHIP 6.2K 0.50% 1/16W
R83	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R84	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R85	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R86	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R87	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R88	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R89	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R90	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R91	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R92	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R93	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R94	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R95	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R96	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R97	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R98	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R99	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R100	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R101	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R102	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R103	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R104	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R105	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R106	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R107	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R108	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R109	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R110	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R111	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R114	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R115	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R118	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R119	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R120	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R121	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R122	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R123	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R124	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R125	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R126	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R127	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R128	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R129	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R130	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R131	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R132	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R133	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R134	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R135	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R136	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R137	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R138	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R139	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R140	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R141	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R142	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R143	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R144	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R145	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R146	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R147	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R148	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R149	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R150	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R151	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R152	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R153	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R154	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R155	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R160	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R161	1-216-862-11	s	METAL, CHIP 2.7M 5% 1/16W
R162	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R163	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R164	1-218-751-11	s	METAL, CHIP 300K 0.50% 1/16W
R165	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R166	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W BVP-570: S/N 15331 and higher BVP-570WSPK: S/N 55111 and higher
RV1	1-237-035-11	s	RES, ADJ METAL 5K
S1	1-692-270-41	s	SWITCH, SLIDE

CN-1120 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8272-549-A	o	MOUNTED CIRCUIT BOARD, CN-1120
C1	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C2	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C3	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C4	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C5	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C6	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
CN201	1-569-532-11	s	HOUSING, 30P
CN202	1-569-532-11	s	HOUSING, 30P
FL1	1-239-719-11	s	FILTER, CHIP EMI
FL2	1-239-719-11	s	FILTER, CHIP EMI
FL3	1-239-719-11	s	FILTER, CHIP EMI
FL4	1-239-825-11	s	FILTER, CHIP EMI
FL5	1-239-719-11	s	FILTER, CHIP EMI
FL6	1-239-825-11	s	FILTER, CHIP EMI
FL7	1-239-719-11	s	FILTER, CHIP EMI
FL8	1-239-719-11	s	FILTER, CHIP EMI
FL9	1-239-719-11	s	FILTER, CHIP EMI
FL10	1-239-825-11	s	FILTER, CHIP EMI
FL11	1-239-719-11	s	FILTER, CHIP EMI
FL12	1-239-825-11	s	FILTER, CHIP EMI
FL13	1-239-719-11	s	FILTER, CHIP EMI
FL14	1-239-825-11	s	FILTER, CHIP EMI
FL15	1-239-719-11	s	FILTER, CHIP EMI
FL16	1-239-825-11	s	FILTER, CHIP EMI
FL17	1-239-719-11	s	FILTER, CHIP EMI
FL18	1-239-825-11	s	FILTER, CHIP EMI
FL19	1-239-825-11	s	FILTER, CHIP EMI
FL20	1-239-825-11	s	FILTER, CHIP EMI
FL21	1-239-825-11	s	FILTER, CHIP EMI
FL22	1-239-719-11	s	FILTER, CHIP EMI
FL23	1-239-719-11	s	FILTER, CHIP EMI
FL24	1-239-719-11	s	FILTER, CHIP EMI
FL25	1-239-825-11	s	FILTER, CHIP EMI
FL26	1-239-719-11	s	FILTER, CHIP EMI
FL27	1-239-825-11	s	FILTER, CHIP EMI
FL28	1-239-825-11	s	FILTER, CHIP EMI
FL29	1-239-825-11	s	FILTER, CHIP EMI
FL30	1-239-825-11	s	FILTER, CHIP EMI
FL31	1-239-825-11	s	FILTER, CHIP EMI
FL32	1-239-825-11	s	FILTER, CHIP EMI
FL33	1-239-825-11	s	FILTER, CHIP EMI
FL34	1-239-825-11	s	FILTER, CHIP EMI
FL35	1-239-825-11	s	FILTER, CHIP EMI
FL36	1-239-825-11	s	FILTER, CHIP EMI
FL37	1-239-825-11	s	FILTER, CHIP EMI
FL38	1-239-719-11	s	FILTER, CHIP EMI
FL39	1-239-825-11	s	FILTER, CHIP EMI
FL40	1-239-719-11	s	FILTER, CHIP EMI
FL41	1-239-719-11	s	FILTER, CHIP EMI
FL42	1-239-719-11	s	FILTER, CHIP EMI
FL43	1-239-825-11	s	FILTER, CHIP EMI
FL44	1-239-825-11	s	FILTER, CHIP EMI

CN-1121 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8272-550-A	o	MOUNTED CIRCUIT BOARD, CN-1121
CN101	1-569-531-11	s	HOUSING, 20P
CN102	1-569-532-11	s	HOUSING, 30P
FL1	1-239-719-11	s	FILTER, CHIP EMI
FL2	1-239-719-11	s	FILTER, CHIP EMI
FL3	1-239-719-11	s	FILTER, CHIP EMI
FL4	1-239-719-11	s	FILTER, CHIP EMI
FL5	1-239-719-11	s	FILTER, CHIP EMI
FL6	1-239-719-11	s	FILTER, CHIP EMI
FL7	1-239-719-11	s	FILTER, CHIP EMI
FL8	1-239-719-11	s	FILTER, CHIP EMI
FL9	1-239-719-11	s	FILTER, CHIP EMI
FL10	1-239-719-11	s	FILTER, CHIP EMI
FL11	1-239-719-11	s	FILTER, CHIP EMI
FL12	1-239-719-11	s	FILTER, CHIP EMI
FL13	1-239-719-11	s	FILTER, CHIP EMI
FL14	1-239-719-11	s	FILTER, CHIP EMI
FL15	1-239-719-11	s	FILTER, CHIP EMI
FL16	1-239-719-11	s	FILTER, CHIP EMI
FL17	1-239-719-11	s	FILTER, CHIP EMI
FL18	1-239-719-11	s	FILTER, CHIP EMI
FL19	1-239-719-11	s	FILTER, CHIP EMI
FL20	1-239-719-11	s	FILTER, CHIP EMI
FL21	1-239-719-11	s	FILTER, CHIP EMI
FL22	1-239-719-11	s	FILTER, CHIP EMI
FL23	1-239-719-11	s	FILTER, CHIP EMI
FL24	1-239-719-11	s	FILTER, CHIP EMI
FL25	1-239-719-11	s	FILTER, CHIP EMI
FL26	1-239-719-11	s	FILTER, CHIP EMI
FL27	1-239-719-11	s	FILTER, CHIP EMI
FL28	1-239-719-11	s	FILTER, CHIP EMI
FL30	1-239-719-11	s	FILTER, CHIP EMI
FL31	1-239-719-11	s	FILTER, CHIP EMI
FL32	1-239-719-11	s	FILTER, CHIP EMI
FL33	1-239-719-11	s	FILTER, CHIP EMI
FL34	1-239-719-11	s	FILTER, CHIP EMI
FL35	1-239-719-11	s	FILTER, CHIP EMI
FL37	1-239-825-11	s	FILTER, CHIP EMI
FL38	1-239-719-11	s	FILTER, CHIP EMI
FL39	1-239-719-11	s	FILTER, CHIP EMI

CN-1122 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-657-447-21	o	PRINTED WIRING BOARD, CN-1122
C1	1-128-592-11	s	ELECT 0.33uF 20% 50V
C2	1-128-592-11	s	ELECT 0.33uF 20% 50V
C5	1-126-968-11	s	ELECT 100uF 20% 50V
CN401	1-569-629-11	s	HOUSING, 24P
CN402	1-695-890-21	o	PIN, CONNECTOR (PC BOARD) 12P
CN405	1-764-082-21	s	PIN, CONNECTOR (PC BOARD) 11P
CN406	1-764-078-11	s	PIN, CONNECTOR (PC BOARD) 3P
CN407	1-695-207-21	o	PIN, CONNECTOR (PC BOARD) 6P
R1	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R2	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R3	1-215-421-00	s	METAL 1K 1% 1/6W

CN-1504 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8315-489-A	o	MOUNTED CIRCUIT BOARD, CN-1504
CN1	1-774-261-11	o	CONNECTOR, FFC (ZIF) 24P
CN2	1-774-261-11	o	CONNECTOR, FFC (ZIF) 24P
CN3	1-774-260-11	o	CONNECTOR, FFC (ZIF) 20P
CN4	1-774-260-11	o	CONNECTOR, FFC (ZIF) 20P

CN-1672 Board (FOR BVP-570)

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8319-233-A	o	MOUNTED CIRCUIT BOARD, CN-1672

DA-88A Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8319-647-A	o	MOUNTED CIRCUIT BOARD, DA-88A
1pc	3-692-128-02	o	PANEL, DA-88 PC BOARD
1pc	3-724-753-01	o	RING
6pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C2	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C3	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C4	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C5	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C6	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C7	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C8	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C9	1-165-176-11	s	CERAMIC, CHIP 0.047uF 10% 16V
C10	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C11	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C12	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C13	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C14	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C15	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C16	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C17	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C18	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C19	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C20	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C21	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C23	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C24	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C25	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C26	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C27	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C28	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C29	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C30	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C31	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C32	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C33	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C34	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C35	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C36	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C37	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C38	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C39	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C40	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C41	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C42	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C43	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C44	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C45	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C46	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C47	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C48	1-162-913-11	s	CERAMIC, CHIP 8PF 50V
C49	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C50	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C51	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C52	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C53	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C54	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C55	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C56	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C57	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C58	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C59	1-164-315-11	s	CERAMIC, CHIP 470PF 5% 50V
C61	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C64	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C65	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C66	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C67	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C68	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C69	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C70	1-162-913-11	s	CERAMIC, CHIP 8PF 50V
C71	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C72	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C73	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C74	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C75	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C76	1-135-162-21	s	TANTALUM, CHIP 33uF 10% 6.3V
C77	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C81	1-164-230-11	s	CERAMIC, CHIP 220PF 5% 50V BVP-570: S/N 15431 and higher BVP-570WSPK: S/N 55141 and higher
	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V BVP-570: S/N 15001-15430 BVP-570WSPK: S/N 55001-55140
C82	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C83	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C84	1-164-315-11	s	CERAMIC, CHIP 470PF 5% 50V BVP-570: S/N 15431 and higher BVP-570WSPK: S/N 55141 and higher
	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V BVP-570: S/N 15001-15430 BVP-570WSPK: S/N 55001-55140
C85	1-162-918-11	s	CERAMIC, CHIP 18PF 5% 50V
C87	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C88	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C89	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C90	1-162-911-11	s	CERAMIC, CHIP 6PF 50V
C92	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C93	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C95	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C96	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C97	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C98	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C99	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C100	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C101	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C102	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C103	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C104	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C105	1-164-315-11	s	CERAMIC, CHIP 470PF 5% 50V
C106	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C107	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C109	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C110	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C113	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C114	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C115	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C118	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C119	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C120	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C121	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C122	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C123	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C124	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C125	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C126	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C127	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C128	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C129	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C132	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C133	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C134	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C136	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C137	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C138	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C140	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C141	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C142	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C143	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C144	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C145	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C146	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C147	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C148	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C149	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C150	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C151	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C154	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C155	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C166	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C167	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C169	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C170	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C171	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C172	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C200	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C201	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C202	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C203	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C204	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C205	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C206	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C207	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C208	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C209	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C210	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C211	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C213	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C214	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C215	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C216	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C217	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C218	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C219	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C220	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C221	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C222	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

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C223	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C225	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C226	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C228	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C229	1-162-908-11	s	CERAMIC, CHIP 3PF 50V
C230	1-162-908-11	s	CERAMIC, CHIP 3PF 50V
C231	1-162-908-11	s	CERAMIC, CHIP 3PF 50V
C500	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
D1	8-719-029-63	s	DIODE RD4.3UH-T1
D2	8-719-029-63	s	DIODE RD4.3UH-T1
D3	8-719-029-63	s	DIODE RD4.3UH-T1
D5	8-719-820-41	s	DIODE 1SS302
D6	8-719-820-41	s	DIODE 1SS302
D7	8-719-820-41	s	DIODE 1SS302
D9	8-719-820-41	s	DIODE 1SS302
D10	8-719-820-41	s	DIODE 1SS302
D11	8-719-820-41	s	DIODE 1SS302
D12	8-719-820-41	s	DIODE 1SS302
D13	8-719-820-41	s	DIODE 1SS302
D14	8-719-820-41	s	DIODE 1SS302
D15	8-719-820-41	s	DIODE 1SS302
D16	8-719-820-41	s	DIODE 1SS302
D17	8-719-820-41	s	DIODE 1SS302
D24	8-719-820-41	s	DIODE 1SS302
D25	8-719-820-41	s	DIODE 1SS302
D26	8-719-820-41	s	DIODE 1SS302
D100	8-719-820-41	s	DIODE 1SS302
D101	8-719-820-41	s	DIODE 1SS302
D102	8-719-820-41	s	DIODE 1SS302
FL1	1-239-754-11	s	FILTER, LOW-PASS
FL2	1-239-753-11	s	FILTER, LOW-PASS
FL3	1-233-240-21	s	FILTER, LOW-PASS
FL4	1-239-753-11	s	FILTER, LOW-PASS
FL5	1-233-240-21	s	FILTER, LOW-PASS
FL6	1-239-754-11	s	FILTER, LOW-PASS
FL7	1-239-754-11	s	FILTER, LOW-PASS
FL8	1-239-754-11	s	FILTER, LOW-PASS
IC1	8-759-066-68	s	IC REF-03GS
IC2	8-759-076-06	s	IC TL064CPW
IC3	8-759-369-92	s	IC M51958AFP600D
IC4	8-752-360-44	s	IC CXK1203AR-T4
IC5	8-752-360-44	s	IC CXK1203AR-T4
IC6	8-752-360-44	s	IC CXK1203AR-T4
IC7	8-752-363-60	s	IC CXD2307R-T6
IC8	8-759-523-78	s	IC TC74VHC00FT(EL)
IC9	8-759-058-54	s	IC TC7S00FU(TE85R)
IC10	8-759-086-41	s	IC X24C02S-3.0
IC11	8-759-058-58	s	IC TC7S04FU(TE85R)
IC12	8-759-058-62	s	IC TC7S08FU(TE85R)
IC13	8-759-233-44	s	IC TC74HC595AF
IC14	8-759-064-36	s	IC MB88346BPFV
IC15	8-759-082-61	s	IC TC4W53FU
IC16	8-759-981-48	s	IC NJM082M
IC17	8-759-082-61	s	IC TC4W53FU
IC18	8-759-082-61	s	IC TC4W53FU
IC19	8-759-524-27	s	IC TC74VHC244FT(EL)
IC20	8-759-082-61	s	IC TC4W53FU

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Ref. No. or Q'ty	Part No.	SP	Description
IC23	8-759-287-54	s	IC TL084CPW-E20
IC24	8-759-082-61	s	IC TC4W53FU
IC25	8-759-523-01	s	IC TC74HC4052AFT(EL)
IC26	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC27	8-759-287-54	s	IC TL084CPW-E20
IC28	8-759-523-01	s	IC TC74HC4052AFT(EL)
IC29	8-759-082-61	s	IC TC4W53FU
IC34	8-759-271-86	s	IC TC7SH04FU
IC35	8-759-523-04	s	IC TC74HC4538AFT(EL)
IC36	8-759-233-44	s	IC TC74HC595AF
IC37	8-759-082-59	s	IC TC7W32FU
IC100	8-759-058-62	s	IC TC7S08FU(TE85R)
IC101	8-759-058-58	s	IC TC7S04FU(TE85R)
IC102	8-759-082-59	s	IC TC7W32FU
IC103	8-759-058-64	s	IC TC7S32FU(TE85R)
IC104	8-759-058-54	s	IC TC7S00FU(TE85R)
IC105	8-759-058-64	s	IC TC7S32FU(TE85R)
IC106	8-759-058-62	s	IC TC7S08FU(TE85R)
IC107	8-759-196-96	s	IC TC7SH08FU-TE85R
IC108	8-759-058-54	s	IC TC7S00FU(TE85R)
IC109	8-759-058-62	s	IC TC7S08FU(TE85R)
IC110	8-759-058-58	s	IC TC7S04FU(TE85R)
JR1	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
JR2	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
JR3	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
JR4	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
L1	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L2	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L3	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L4	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L5	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L6	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L7	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L8	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L9	1-410-385-11	s	INDUCTOR, CHIP 22uH
L10	1-410-385-11	s	INDUCTOR, CHIP 22uH
L11	1-410-385-11	s	INDUCTOR, CHIP 22uH
L12	1-410-392-11	s	INDUCTOR, CHIP 82uH
L13	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L14	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L15	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L16	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L17	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L18	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L19	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L20	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L21	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L22	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L23	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L24	1-410-389-31	s	INDUCTOR CHIP 47uH
L25	1-410-385-11	s	INDUCTOR, CHIP 22uH
Q1	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q2	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q3	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q4	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q7	8-729-117-32	s	TRANSISTOR 2SC4177
Q8	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q9	8-729-117-73	s	TRANSISTOR 2SC4178-F14

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Q10	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q11	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q12	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q13	8-729-122-63	s	TRANSISTOR 2SA1226
Q14	8-729-122-63	s	TRANSISTOR 2SA1226
Q15	8-729-122-63	s	TRANSISTOR 2SA1226
Q16	8-729-117-32	s	TRANSISTOR 2SC4177
Q17	8-729-122-63	s	TRANSISTOR 2SA1226
Q18	8-729-142-90	s	TRANSISTOR 2SK853-K5
Q19	8-729-403-32	s	TRANSISTOR XN6534
Q20	8-729-920-48	s	TRANSISTOR IMH2
Q22	8-729-122-63	s	TRANSISTOR 2SA1226
Q23	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q25	8-729-117-32	s	TRANSISTOR 2SC4177
Q26	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q27	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q28	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q29	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q30	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q32	8-729-122-63	s	TRANSISTOR 2SA1226
Q33	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q34	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q43	8-729-403-32	s	TRANSISTOR XN6534
Q44	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q45	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q46	8-729-920-48	s	TRANSISTOR IMH2
Q47	8-729-117-32	s	TRANSISTOR 2SC4177
Q48	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q49	8-729-122-63	s	TRANSISTOR 2SA1226
Q50	8-729-122-63	s	TRANSISTOR 2SA1226
Q51	8-729-122-63	s	TRANSISTOR 2SA1226
Q52	8-729-117-32	s	TRANSISTOR 2SC4177
Q53	8-729-122-63	s	TRANSISTOR 2SA1226
Q54	8-729-142-90	s	TRANSISTOR 2SK853-K5
Q59	8-729-403-32	s	TRANSISTOR XN6534
Q63	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q67	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q68	8-729-122-63	s	TRANSISTOR 2SA1226
Q69	8-729-122-63	s	TRANSISTOR 2SA1226
Q70	8-729-117-32	s	TRANSISTOR 2SC4177
Q71	8-729-122-63	s	TRANSISTOR 2SA1226
Q72	8-729-142-90	s	TRANSISTOR 2SK853-K5
Q73	8-729-122-63	s	TRANSISTOR 2SA1226
Q75	8-729-403-32	s	TRANSISTOR XN6534
Q79	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q83	8-729-117-32	s	TRANSISTOR 2SC4177
Q84	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q85	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q86	8-729-122-63	s	TRANSISTOR 2SA1226
Q87	8-729-122-63	s	TRANSISTOR 2SA1226
Q88	8-729-122-63	s	TRANSISTOR 2SA1226
Q89	8-729-117-32	s	TRANSISTOR 2SC4177
Q90	8-729-122-63	s	TRANSISTOR 2SA1226
Q91	8-729-142-90	s	TRANSISTOR 2SK853-K5
Q92	8-729-122-63	s	TRANSISTOR 2SA1226
Q94	8-729-403-32	s	TRANSISTOR XN6534
Q98	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q100	8-729-403-32	s	TRANSISTOR XN6534
Q101	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14

(DA-88A Board)

Ref. No. or Q'ty	Part No.	SP	Description
Q102	8-729-122-63	s	TRANSISTOR 2SA1226
Q103	8-729-403-32	s	TRANSISTOR XN6534
Q104	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q105	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q106	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q107	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q108	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q109	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q110	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q111	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q112	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q113	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q114	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q115	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q117	8-729-122-63	s	TRANSISTOR 2SA1226
R1	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R2	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R3	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R4	1-218-677-11	s	METAL, CHIP 240 0.50% 1/16W
R5	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R6	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R7	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R8	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R9	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R10	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R11	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R12	1-218-729-11	s	METAL, CHIP 36K 0.50% 1/16W
R13	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R14	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R15	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R16	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R17	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R18	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R19	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R20	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R21	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R22	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R23	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R24	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R25	1-216-832-11	s	METAL, CHIP 8.2K 5% 1/16W
R26	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R27	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R33	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R34	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R35	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R36	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R37	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R38	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R39	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R40	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R41	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R42	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R43	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R44	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R45	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R46	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R47	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R48	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R49	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R50	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R51	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R52	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R53	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R54	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R56	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R57	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R58	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R59	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R60	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R61	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R62	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R63	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R64	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R65	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R66	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R67	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R68	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R69	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R70	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R71	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R72	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R73	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R74	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R75	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R76	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R77	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R78	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R79	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R80	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R81	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R82	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R83	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R84	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R85	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R87	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R88	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R89	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R90	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R91	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R92	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R93	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R94	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R95	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R96	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R97	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R98	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R99	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R100	1-216-830-11	s	METAL, CHIP 5.6K 5% 1/16W
R101	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R102	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R103	1-218-725-11	s	METAL, CHIP 24K 0.50% 1/16W
R105	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R106	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R107	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R108	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R110	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R111	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R112	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R113	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R114	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R115	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R116	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R117	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R118	1-218-691-11	s	METAL, CHIP 910 0.50% 1/16W
R119	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R120	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R121	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R122	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R123	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R124	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R127	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R128	1-216-832-11	s	METAL, CHIP 8.2K 5% 1/16W
R129	1-216-830-11	s	METAL, CHIP 5.6K 5% 1/16W
R130	1-216-832-11	s	METAL, CHIP 8.2K 5% 1/16W
R131	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R135	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R136	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R137	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R142	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R145	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R146	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R147	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R148	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R149	1-218-694-11	s	METAL, CHIP 1.2K 0.50% 1/16W
R150	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R151	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R152	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R153	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R154	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R155	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R156	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R157	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R158	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R159	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R160	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R161	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R162	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R163	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R164	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R165	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R166	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R167	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R168	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R169	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R170	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R171	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R172	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R173	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R174	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R175	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R177	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R178	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R184	1-218-673-11	s	METAL, CHIP 160 0.50% 1/16W
R185	1-218-648-11	s	METAL, CHIP 15 0.50% 1/16W
R186	1-218-661-11	s	METAL, CHIP 51 0.50% 1/16W
R187	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R188	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R190	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R191	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R192	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R193	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R194	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R195	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R196	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R197	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W BVP-570: S/N 15431 and higher BVP-570WSPK: S/N 55141 and higher
	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W BVP-570: S/N 15001-15430 BVP-570WSPK: S/N 55001-55140
R198	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R199	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R200	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R201	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R202	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R205	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R206	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R207	1-218-725-11	s	METAL, CHIP 24K 0.50% 1/16W
R208	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R209	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R210	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R211	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R212	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R213	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R214	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R215	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R216	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R217	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R218	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R219	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R220	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R221	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R222	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R223	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R224	1-218-686-11	s	METAL, CHIP 560 0.50% 1/16W
R225	1-218-697-11	s	METAL, CHIP 1.6K 0.50% 1/16W
R226	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R227	1-218-709-11	s	METAL, CHIP 5.1K 0.50% 1/16W
R228	1-218-675-11	s	METAL, CHIP 200 0.50% 1/16W
R229	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R231	1-218-674-11	s	METAL, CHIP 180 0.50% 1/16W
R232	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R233	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R234	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R235	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R236	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R239	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R240	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R241	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R242	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R243	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R244	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R246	1-218-729-11	s	METAL, CHIP 36K 0.50% 1/16W
R247	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R248	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R249	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R250	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R251	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R252	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R253	1-216-830-11	s	METAL, CHIP 5.6K 5% 1/16W
R254	1-218-718-11	s	METAL, CHIP 12K 0.50% 1/16W
R255	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R256	1-218-725-11	s	METAL, CHIP 24K 0.50% 1/16W
R257	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R258	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R259	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R260	1-220-158-11	s	METAL, CHIP 3.6K 5% 1/16W
R261	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R262	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R263	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R264	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R265	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R266	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R267	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R268	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R269	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R270	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R271	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R272	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R273	1-218-686-11	s	METAL, CHIP 560 0.50% 1/16W
R274	1-218-697-11	s	METAL, CHIP 1.6K 0.50% 1/16W
R275	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R276	1-218-709-11	s	METAL, CHIP 5.1K 0.50% 1/16W
R277	1-218-675-11	s	METAL, CHIP 200 0.50% 1/16W
R278	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R280	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R281	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R282	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R283	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R284	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R285	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R288	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R289	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R290	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R293	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R294	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R295	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R300	1-218-713-11	s	METAL, CHIP 7.5K 0.50% 1/16W
R301	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R302	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R303	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R304	1-218-675-11	s	METAL, CHIP 200 0.50% 1/16W
R305	1-218-725-11	s	METAL, CHIP 24K 0.50% 1/16W
R306	1-216-832-11	s	METAL, CHIP 8.2K 5% 1/16W
R307	1-218-713-11	s	METAL, CHIP 7.5K 0.50% 1/16W
R308	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R309	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R310	1-216-826-11	s	METAL, CHIP 2.7K 5% 1/16W
R311	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R312	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R313	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R314	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R315	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R316	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R317	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R318	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R320	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R321	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R322	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R323	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R324	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R325	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R326	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R327	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R328	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R330	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R331	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R332	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R333	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R334	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R335	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R336	1-218-727-11	s	METAL, CHIP 30K 0.50% 1/16W
R337	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R357	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R358	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R361	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R362	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R363	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R364	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R365	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R366	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R367	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R368	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R369	1-218-674-11	s	METAL, CHIP 180 0.50% 1/16W
R370	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R371	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R372	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R373	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R374	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R375	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R378	1-218-664-11	s	METAL, CHIP 68 0.50% 1/16W
R379	1-218-727-11	s	METAL, CHIP 30K 0.50% 1/16W
R380	1-218-655-91	s	METAL, CHIP 30 0.50% 1/16W
RB1	1-239-309-11	s	RESISTOR BLOCK, CHIP 100KX8
RB2	1-239-309-11	s	RESISTOR BLOCK, CHIP 100KX8
RB3	1-239-309-11	s	RESISTOR BLOCK, CHIP 100KX8
RB4	1-236-908-11	s	RESISTOR, BLOCK, CHIP 10KX4
RB5	1-236-908-11	s	RESISTOR, BLOCK, CHIP 10KX4
RB6	1-236-906-11	s	NETWORK RESISTOR (CHIP) 15KX4
RB7	1-236-906-11	s	NETWORK RESISTOR (CHIP) 15KX4
RV1	1-241-832-21	s	RES, ADJ, CERMET 5K BVP-570: S/N 15431 and higher BVP-570WSPK: S/N 55141 and higher

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IF-510 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8272-568-A	o	MOUNTED CIRCUIT BOARD, IF-510
1pc	3-692-129-02	o	PANEL, IF-510 PC BOARD
1pc	3-724-753-01	o	RING
6pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C10	1-104-913-11	s	TANTALUM, CHIP 10uF 20% 16V
C11	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C12	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C13	1-135-208-11	s	TANTAUM, CHIP 1uF 20% 10V
C14	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C15	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C16	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C17	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C20	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C21	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C22	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C23	1-135-208-11	s	TANTAUM, CHIP 1uF 20% 10V
C24	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C25	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C26	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C30	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C31	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C32	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C33	1-135-208-11	s	TANTAUM, CHIP 1uF 20% 10V
C34	1-104-911-11	s	TANTALUM, CHIP 33uF 20% 10V
C35	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C36	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C101	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C102	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C103	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C104	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C105	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C150	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C151	1-135-160-21	s	TANTALUM, CHIP 15uF 10% 16V
C152	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C153	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C154	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C155	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C201	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C202	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C203	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C204	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C205	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C206	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C221	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C222	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C223	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C224	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C225	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C226	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C250	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C252	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C253	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C254	1-162-922-11	s	CERAMIC, CHIP 39PF 5% 50V
C255	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C300	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C301	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C303	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C307	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C308	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C309	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C311	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C312	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C313	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C315	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C320	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C321	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C322	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C330	1-162-958-11	s	CERAMIC, CHIP 270PF 5% 50V
C350	1-104-913-11	s	TANTALUM, CHIP 10uF 20% 16V
C351	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C352	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C353	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C400	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C401	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C402	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C403	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C404	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C405	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C406	1-104-910-11	s	TANTALUM, CHIP 15uF 10% 10V
C407	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C408	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C409	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C410	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C411	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C412	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C413	1-104-910-11	s	TANTALUM, CHIP 15uF 10% 10V
C414	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C415	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C416	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C417	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C418	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C419	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C420	1-104-910-11	s	TANTALUM, CHIP 15uF 10% 10V
C421	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C422	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C502	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C503	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C504	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C505	1-104-910-11	s	TANTALUM, CHIP 15uF 10% 10V
C508	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C509	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C510	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C511	1-104-910-11	s	TANTALUM, CHIP 15uF 10% 10V
C513	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C514	1-162-911-11	s	CERAMIC, CHIP 6PF 50V
C515	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C516	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C517	1-104-910-11	s	TANTALUM, CHIP 15uF 10% 10V
C518	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C519	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C520	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C521	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C522	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C524	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C525	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C601	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C602	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C603	1-162-907-11	s	CERAMIC, CHIP 2PF 50V

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Ref. No. or Q'ty	Part No.	SP	Description
C604	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C605	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C606	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C621	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C622	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C623	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C624	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C625	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C626	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C641	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C642	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C643	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C644	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C645	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C646	1-104-914-11	s	TANTALUM, CHIP 22uF 20% 16V
C701	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C702	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C703	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C704	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C705	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C706	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C707	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C747	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
D11	8-719-029-63	s	DIODE RD4.3UH-T1
D21	8-719-029-63	s	DIODE RD4.3UH-T1
D31	8-719-029-57	s	DIODE RD2.4UH-T1
D101	8-719-820-41	s	DIODE 1SS302
D250	8-719-948-48	s	DIODE HSM88AS-TL
D400	8-719-820-41	s	DIODE 1SS302
D401	8-719-820-41	s	DIODE 1SS302
D402	8-719-820-41	s	DIODE 1SS302
D500	8-719-820-41	s	DIODE 1SS302
IC12	8-759-076-06	s	IC TL064CPW
IC101	8-759-082-61	s	IC TC4W53FU
IC151	8-759-925-76	s	IC SN74HC08ANS
IC152	8-759-082-55	s	IC TC7W00FU
IC153	8-759-233-44	s	IC TC74HC595AF
IC154	8-759-082-58	s	IC TC7W08FU
IC155	8-759-086-41	s	IC X24C02S-3.0
IC200	8-759-082-61	s	IC TC4W53FU
IC201	8-759-523-01	s	IC TC74HC4052AFT(EL)
IC202	8-759-523-01	s	IC TC74HC4052AFT(EL)
IC206	8-759-054-61	s	IC CLC505AJE
IC301	8-759-254-49	s	IC EL4581CS-TE2
IC302	8-759-925-90	s	IC SN74HC74ANS
IC303	8-759-925-90	s	IC SN74HC74ANS
IC304	8-759-082-59	s	IC TC7W32FU
IC305	8-759-925-90	s	IC SN74HC74ANS
IC306	8-759-082-57	s	IC TC7W04FU
IC307	8-759-082-58	s	IC TC7W08FU
IC308	8-759-058-62	s	IC TC7S08FU(TE85R)
IC309	8-759-082-59	s	IC TC7W32FU
IC310	8-759-082-58	s	IC TC7W08FU
IC322	8-759-032-01	s	IC MC74HC00AF
IC351	8-759-925-90	s	IC SN74HC74ANS
IC352	8-759-058-58	s	IC TC7S04FU(TE85R)
IC400	8-759-082-61	s	IC TC4W53FU
IC404	8-759-209-57	s	IC TC4S69F
IC410	8-759-082-61	s	IC TC4W53FU

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Ref. No. or Q'ty	Part No.	SP	Description
IC420	8-759-082-61	s	IC TC4W53FU
IC500	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC501	8-759-981-48	s	IC NJM082M
IC502	8-759-082-58	s	IC TC7W08FU
IC601	8-759-054-61	s	IC CLC505AJE
IC621	8-759-054-61	s	IC CLC505AJE
IC641	8-759-054-61	s	IC CLC505AJE
IC701	8-759-988-13	s	IC LM393PS
IC702	8-759-195-81	s	IC TC7S86FU
L1	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L2	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L3	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L150	1-410-369-11	s	INDUCTOR CHIP 1uH
L201	1-410-369-11	s	INDUCTOR CHIP 1uH
L202	1-410-369-11	s	INDUCTOR CHIP 1uH
L203	1-410-369-11	s	INDUCTOR CHIP 1uH
L301	1-410-369-11	s	INDUCTOR CHIP 1uH
L400	1-410-369-11	s	INDUCTOR CHIP 1uH
L401	1-410-369-11	s	INDUCTOR CHIP 1uH
L402	1-410-369-11	s	INDUCTOR CHIP 1uH
L500	1-410-369-11	s	INDUCTOR CHIP 1uH
L501	1-410-369-11	s	INDUCTOR CHIP 1uH
L502	1-410-369-11	s	INDUCTOR CHIP 1uH
L601	1-410-369-11	s	INDUCTOR CHIP 1uH
L602	1-410-369-11	s	INDUCTOR CHIP 1uH
L603	1-410-369-11	s	INDUCTOR CHIP 1uH
L700	1-410-369-11	s	INDUCTOR CHIP 1uH
Q1	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q2	8-729-117-32	s	TRANSISTOR 2SC4177
Q10	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q20	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q30	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q101	8-729-122-63	s	TRANSISTOR 2SA1226
Q102	8-729-122-63	s	TRANSISTOR 2SA1226
Q103	8-729-122-63	s	TRANSISTOR 2SA1226
Q109	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q110	8-729-117-32	s	TRANSISTOR 2SC4177
Q205	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q206	8-729-117-32	s	TRANSISTOR 2SC4177
Q207	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q208	8-729-117-32	s	TRANSISTOR 2SC4177
Q209	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q210	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q211	8-729-117-32	s	TRANSISTOR 2SC4177
Q250	8-729-117-32	s	TRANSISTOR 2SC4177
Q251	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q252	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q271	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q272	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q273	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q352	8-729-920-48	s	TRANSISTOR IMH2
Q353	8-729-920-48	s	TRANSISTOR IMH2
Q354	8-729-028-91	s	TRANSISTOR DTA144EUA-T106
Q401	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q402	8-729-117-32	s	TRANSISTOR 2SC4177
Q403	8-729-026-32	s	TRANSISTOR XP6534
Q404	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q405	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q406	8-729-117-32	s	TRANSISTOR 2SC4177
Q410	8-729-026-32	s	TRANSISTOR XP6534
Q411	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q412	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q413	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q414	8-729-117-32	s	TRANSISTOR 2SC4177
Q420	8-729-026-32	s	TRANSISTOR XP6534
Q421	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q422	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q423	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q424	8-729-117-32	s	TRANSISTOR 2SC4177
Q430	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q431	8-729-117-32	s	TRANSISTOR 2SC4177
Q500	8-729-026-32	s	TRANSISTOR XP6534
Q501	8-729-122-63	s	TRANSISTOR 2SA1226
Q502	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q503	8-729-026-32	s	TRANSISTOR XP6534
Q504	8-729-122-63	s	TRANSISTOR 2SA1226
Q505	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q506	8-729-026-32	s	TRANSISTOR XP6534
Q507	8-729-122-63	s	TRANSISTOR 2SA1226
Q508	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q509	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q510	8-729-117-32	s	TRANSISTOR 2SC4177
Q701	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q702	8-729-800-37	s	TRANSISTOR 2SD1048-X7
Q703	8-729-141-48	s	TRANSISTOR 2SB624-BV345
R1	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R2	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R8	1-218-748-11	s	METAL, CHIP 220K 0.50% 1/16W
R9	1-218-748-11	s	METAL, CHIP 220K 0.50% 1/16W
R10	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R13	1-218-677-11	s	METAL, CHIP 240 0.50% 1/16W
R14	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R15	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R23	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R24	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R25	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R33	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R34	1-218-729-11	s	METAL, CHIP 36K 0.50% 1/16W
R35	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R100	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R101	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R102	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R103	1-218-685-11	s	METAL, CHIP 510 0.50% 1/16W
R104	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R105	1-218-685-11	s	METAL, CHIP 510 0.50% 1/16W
R106	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R107	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R110	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R111	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R151	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R152	1-218-748-11	s	METAL, CHIP 220K 0.50% 1/16W
R153	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R154	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R155	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R156	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R198	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R199	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R200	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R201	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R202	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R203	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R204	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R205	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R206	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R207	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R208	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R209	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R210	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R211	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R212	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R213	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R214	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R221	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R222	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R224	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R225	1-218-690-11	s	METAL, CHIP 820 0.50% 1/16W
R226	1-218-688-11	s	METAL, CHIP 680 0.50% 1/16W
R227	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R228	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R229	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R230	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R250	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R251	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R252	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R253	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R254	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R256	1-218-685-11	s	METAL, CHIP 510 0.50% 1/16W
R257	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R258	1-218-722-11	s	METAL, CHIP 18K 0.50% 1/16W
R259	1-218-685-11	s	METAL, CHIP 510 0.50% 1/16W
R261	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R263	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R264	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R271	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R272	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R273	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R274	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R275	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R276	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R277	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R278	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R279	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R310	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R311	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R315	1-216-855-11	s	METAL, CHIP 680K 5% 1/16W
R320	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R321	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R322	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R323	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R324	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R325	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R326	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R327	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R328	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R329	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R351	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R352	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R353	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R354	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R361	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R400	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R401	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R402	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R403	1-218-681-11	s	METAL, CHIP 360 0.50% 1/16W
R404	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R405	1-218-729-11	s	METAL, CHIP 36K 0.50% 1/16W
R406	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R407	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R408	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R409	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R410	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R411	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R412	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R413	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R414	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R415	1-218-664-11	s	METAL, CHIP 68 0.50% 1/16W
R416	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R417	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R418	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R419	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R420	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R421	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R422	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R423	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R424	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R425	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R426	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R427	1-218-664-11	s	METAL, CHIP 68 0.50% 1/16W
R428	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R429	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R430	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R431	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R432	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R433	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R434	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R435	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R436	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R437	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R438	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R439	1-218-664-11	s	METAL, CHIP 68 0.50% 1/16W
R440	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R441	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R442	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R443	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R444	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R445	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R446	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R447	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R448	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R500	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R501	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R502	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R503	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R504	1-216-864-11	s	METAL, CHIP 0 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R505	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R506	1-218-671-11	s	METAL, CHIP 130 0.50% 1/16W
R507	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R508	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R509	1-218-694-11	s	METAL, CHIP 1.2K 0.50% 1/16W
R510	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R511	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R512	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R513	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R514	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R515	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R516	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R517	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R518	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R519	1-218-650-11	s	METAL, CHIP 18 0.50% 1/16W
R520	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R521	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R522	1-218-694-11	s	METAL, CHIP 1.2K 0.50% 1/16W
R523	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R524	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R525	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R526	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R527	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R528	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R529	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R530	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R531	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R532	1-218-694-11	s	METAL, CHIP 1.2K 0.50% 1/16W
R533	1-218-691-11	s	METAL, CHIP 910 0.50% 1/16W
R534	1-218-667-11	s	METAL, CHIP 91 0.50% 1/16W
R535	1-218-685-11	s	METAL, CHIP 510 0.50% 1/16W
R536	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R537	1-218-664-11	s	METAL, CHIP 68 0.50% 1/16W
R538	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R539	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R540	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R541	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R542	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R543	1-218-712-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R544	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R545	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R546	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R547	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R548	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R549	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R550	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R551	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R552	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R553	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R554	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R555	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R601	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R602	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R603	1-218-670-11	s	METAL, CHIP 120 0.50% 1/16W
R604	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R605	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R606	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R607	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R621	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R622	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R623	1-218-671-11	s	METAL, CHIP 130 0.50% 1/16W
R624	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R625	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R626	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R627	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R641	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R642	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R643	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R644	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R645	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R646	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R647	1-218-665-11	s	METAL, CHIP 75 0.50% 1/16W
R701	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R702	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R703	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R704	1-218-725-11	s	METAL, CHIP 24K 0.50% 1/16W
R705	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R706	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R707	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R708	1-218-881-11	s	METAL, CHIP 27K 0.50% 1/16W
R709	1-216-631-11	s	METAL, CHIP 150 0.50% 1/10W
R710	1-216-631-11	s	METAL, CHIP 150 0.50% 1/10W
R711	1-216-631-11	s	METAL, CHIP 150 0.50% 1/10W
R712	1-216-631-11	s	METAL, CHIP 150 0.50% 1/10W
R713	1-216-631-11	s	METAL, CHIP 150 0.50% 1/10W
R714	1-216-631-11	s	METAL, CHIP 150 0.50% 1/10W
R715	1-218-727-11	s	METAL, CHIP 30K 0.50% 1/16W
R716	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R717	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R718	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R719	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R721	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R722	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
RV101	1-241-260-11	s	RES, ADJ METAL 500
S1	1-572-272-11	s	SWITCH, SLIDE

MB-602 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8272-547-A	o	MOUNTED CIRCUIT BOARD, MB-602
15pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C2	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C3	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C4	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C5	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C6	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C7	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C8	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C9	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C10	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C11	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C12	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C13	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C14	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C15	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C16	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C17	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C18	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C19	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C20	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C21	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C22	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C23	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C24	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C25	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C26	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C27	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C28	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C29	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C30	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C31	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
CN7	1-569-629-11	s	HOUSING, 24P
CN11	1-569-532-11	s	HOUSING, 30P
CN12	1-569-532-11	s	HOUSING, 30P
CN13	1-569-532-11	s	HOUSING, 30P
CN14	1-569-531-11	s	HOUSING, 20P
CN15	1-764-088-11	o	PIN, CONNECTOR (PC BOARD) 3P
CN21	1-764-093-21	o	PIN, CONNECTOR (PC BOARD) 8P
CN22	1-774-260-11	o	CONNECTOR, FFC (ZIF) 20P
CN23	1-774-261-11	o	CONNECTOR, FFC (ZIF) 24P
CN31	1-750-934-21	o	PIN, CONNECTOR 20P
CN32	1-764-097-11	o	PIN, CONNECTOR (PC BOARD) 12P
CN41	1-569-629-11	s	HOUSING, 24P
CN42	1-750-635-21	o	PIN, CONNECTOR (PC BOARD) 5P
CN51	1-770-580-11	o	CONNECTOR, 26P FEMALE
D1	8-719-042-14	s	DIODE DE5LC20U-TA2
IC1	8-759-524-50	s	IC TC74VHC541FT(EL)
IC2	8-759-524-50	s	IC TC74VHC541FT(EL)
IC3	8-759-524-50	s	IC TC74VHC541FT(EL)
IC4	8-759-524-50	s	IC TC74VHC541FT(EL)
IC5	8-759-086-41	s	IC X24C02S-3.0
Q1	8-729-119-64	s	TRANSISTOR 2SA811A-C17
Q2	8-729-271-32	s	TRANSISTOR 2SC1622A-D17
R1	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R2	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R3	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R4	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R6	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R7	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R8	1-216-842-11	s	METAL, CHIP 56K 5% 1/16W
R9	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R10	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R11	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R12	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
RB1	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB2	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB3	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB4	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB5	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB6	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB7	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB8	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
S1	1-572-272-11	s	SWITCH, SLIDE

PR-242 Board

Ref. No. or Q’ty	Part No.	SP	Description
1pc	A-8319-224-A	o	MOUNTED CIRCUIT BOARD, PR-242
3pcs	7-682-545-04	s	SCREW +B 3X4
3pcs	2-280-622-01	o	SUPPORT (M3), HEXAGON
C1	1-128-393-11	s	ELECT 100uF 20% 10V
C2	1-128-393-11	s	ELECT 100uF 20% 10V
C3	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C4	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C5	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C6	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C7	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C8	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C9	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C10	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C12	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C13	1-135-180-21	s	TANTALUM, CHIP 33uF 10% 10V
C14	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C15	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C16	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C17	1-128-393-11	s	ELECT 100uF 20% 10V
C18	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C19	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C20	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C22	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C23	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C24	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C26	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C28	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C29	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C30	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C31	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C32	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C33	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C34	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C35	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C36	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C37	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C38	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C39	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C40	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C41	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C42	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C43	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C44	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C45	1-162-907-11	s	CERAMIC, CHIP 2PF 50V
C46	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C47	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C48	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C49	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C50	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C51	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C52	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C53	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C54	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C55	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C56	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C57	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C59	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C60	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q’ty	Part No.	SP	Description
C61	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C62	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C64	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C65	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C66	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C67	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C69	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C70	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C71	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C72	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C73	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C74	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C75	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C76	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C77	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C78	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C79	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C80	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C81	1-164-505-11	s	CERAMIC, CHIP 2.2uF 16V
C82	1-164-505-11	s	CERAMIC, CHIP 2.2uF 16V
C83	1-164-505-11	s	CERAMIC, CHIP 2.2uF 16V
C84	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C85	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C86	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C87	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C88	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C89	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C90	1-135-176-21	s	TANTALUM, CHIP 0.68uF 20% 35V
C91	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C92	1-164-505-11	s	CERAMIC, CHIP 2.2uF 16V
C93	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C94	1-164-505-11	s	CERAMIC, CHIP 2.2uF 16V
C95	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C96	1-164-505-11	s	CERAMIC, CHIP 2.2uF 16V
C97	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C98	1-113-991-11	s	TANTALUM, CHIP 33uF 20% 16V
C99	1-113-991-11	s	TANTALUM, CHIP 33uF 20% 16V
C100	1-113-991-11	s	TANTALUM, CHIP 33uF 20% 16V
C101	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C103	1-165-128-11	s	CERAMIC, CHIP 0.22uF 16V
C105	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C106	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C107	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C108	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C109	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C110	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C111	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C113	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C116	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C117	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C118	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C119	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C120	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C121	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C122	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C123	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C124	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C125	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C126	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V

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Ref. No. or Q'ty	Part No.	SP	Description
C127	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C128	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C129	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C130	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C131	1-113-642-11	s	TANTALUM, CHIP 47uF 20% 10V
C132	1-113-642-11	s	TANTALUM, CHIP 47uF 20% 10V
C133	1-113-642-11	s	TANTALUM, CHIP 47uF 20% 10V
C134	1-113-642-11	s	TANTALUM, CHIP 47uF 20% 10V
C135	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C136	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C137	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C138	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C139	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C140	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C141	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C142	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C143	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C144	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C145	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C146	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C147	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C148	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C149	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C150	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C151	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C152	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C153	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C154	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C155	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C156	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C157	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C158	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C159	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C160	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C161	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C162	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C163	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C164	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C165	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C166	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C167	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C168	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C169	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C170	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C171	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C172	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C173	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C174	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C175	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C176	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C177	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C178	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C179	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C180	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C181	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C182	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C183	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C184	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C185	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C186	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C187	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C188	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C189	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C190	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C191	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C192	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C193	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C194	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C195	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C196	1-135-211-11	s	TANTALUM, CHIP 6.8uF 20% 6.3V
C197	1-113-994-11	s	TANTALUM, CHIP 6.8uF 20% 16V
C198	1-128-393-11	s	ELECT 100uF 20% 10V
C199	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C200	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C201	1-128-393-11	s	ELECT 100uF 20% 10V
C202	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C203	1-162-916-11	s	CERAMIC, CHIP 12PF 5% 50V
C204	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C205	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C206	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C207	1-162-916-11	s	CERAMIC, CHIP 12PF 5% 50V
C208	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C210	1-162-908-11	s	CERAMIC, CHIP 3PF 50V
C211	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C212	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C213	1-128-393-11	s	ELECT 100uF 20% 10V
C214	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C215	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C216	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C217	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C218	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C219	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C220	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C221	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C222	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C223	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C224	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C225	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C226	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C227	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C228	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C229	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C230	1-128-393-11	s	ELECT 100uF 20% 10V
C231	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C232	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C233	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C234	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C235	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C236	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C239	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C240	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C241	1-113-994-11	s	TANTALUM, CHIP 6.8uF 20% 16V
C242	1-113-994-11	s	TANTALUM, CHIP 6.8uF 20% 16V
C243	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C244	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C245	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C246	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C247	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C248	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C249	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C250	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C251	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C252	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C253	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C254	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C255	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C256	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C257	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C258	1-113-990-11	s	TANTALUM, CHIP 15uF 20% 16V
C259	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C260	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C261	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C262	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C264	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C265	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C266	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C267	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C268	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C269	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C270	1-162-908-11	s	CERAMIC, CHIP 3PF 50V
C271	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C272	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C274	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C275	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C278	1-162-922-11	s	CERAMIC, CHIP 39PF 5% 50V
C280	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C290	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C291	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C300	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C301	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C302	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C303	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C304	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C305	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C306	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C307	1-164-230-11	s	CERAMIC, CHIP 220PF 5% 50V BVP-570: S/N 15671 and higher BVP-570WSPK: S/N 55211 and higher
C308	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C309	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C310	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C311	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C312	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C320	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C321	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C322	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C330	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C331	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C332	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C333	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C334	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C335	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C336	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C337	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C338	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C339	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C340	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C341	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C342	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C343	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C344	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C345	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C346	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C347	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C400	1-162-918-11	s	CERAMIC, CHIP 18PF 5% 50V
C401	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C403	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C404	1-164-382-11	s	CERAMIC, CHIP 91PF 5% 50V
C450	1-135-259-11	s	TANTALUM, CHIP 10uF 20% 6.3
C451	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C452	1-135-259-11	s	TANTALUM, CHIP 10uF 20% 6.3
C453	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C700	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V BVP-570: S/N 15491 and higher BVP-570WSPK: S/N 55211 and higher
C701	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V BVP-570: S/N 15491 and higher BVP-570WSPK: S/N 55211 and higher
C702	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V BVP-570: S/N 15491 and higher BVP-570WSPK: S/N 55211 and higher
CN2	1-569-629-11	s	HOUSING, 24P
D1	8-719-029-63	s	DIODE RD4.3UH-T1
D2	8-719-029-63	s	DIODE RD4.3UH-T1
D3	8-719-029-63	s	DIODE RD4.3UH-T1
D4	8-719-820-41	s	DIODE 1SS302
D5	8-719-820-41	s	DIODE 1SS302
D6	8-719-027-95	s	DIODE HSM88WK
D7	8-719-820-41	s	DIODE 1SS302
D10	8-719-991-33	s	DIODE 1SS133T-77 BVP-570: S/N 15491 and higher BVP-570WSPK: S/N 55211 and higher
D400	8-719-820-41	s	DIODE 1SS302
FL1	1-234-070-21	s	FILTER, LOW-PASS
FL2	1-234-070-21	s	FILTER, LOW-PASS
FL3	1-234-070-21	s	FILTER, LOW-PASS
IC1	8-759-076-06	s	IC TL064CPW
IC2	8-759-632-39	s	IC M51958A-T1
IC3	8-759-632-39	s	IC M51958A-T1
IC5	8-759-447-19	s	IC AD8041AR
IC6	8-759-456-26	s	IC 74LCX541MTCX
IC8	8-759-536-18	s	IC ADS805E-T2
IC9	8-759-456-26	s	IC 74LCX541MTCX
IC10	8-759-447-19	s	IC AD8041AR
IC11	8-759-456-26	s	IC 74LCX541MTCX
IC12	8-759-536-18	s	IC ADS805E-T2
IC13	8-759-447-19	s	IC AD8041AR
IC14	8-759-456-26	s	IC 74LCX541MTCX
IC16	8-759-536-18	s	IC ADS805E-T2
IC18	8-759-456-26	s	IC 74LCX541MTCX
IC19	8-759-050-53	s	IC SN74HCT08APW-E20
IC21	8-759-471-89	s	IC 74VHC02MTCX
IC22	8-759-086-41	s	IC X24C02S-3.0
IC23	8-759-996-82	s	IC MSM82C55A-2GS

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Ref. No. or Q'ty	Part No.	SP	Description
IC24	8-759-233-44	s	IC TC74HC595AF
IC26	8-759-050-50	s	IC SN74HCT04APW-E05
IC28	8-759-635-27	s	IC M62352GP
IC30	8-759-471-91	s	IC 74VHC04MTCX
IC31	8-759-389-25	s	IC 74LCX02MTCX
IC32	8-759-058-62	s	IC TC7S08FU(TE85R)
IC33	8-759-058-54	s	IC TC7S00FU(TE85R)
IC34	8-759-471-85	s	IC 74VHC00MTCX
IC35	8-759-472-02	s	IC 74VHC32MTCX
IC36	8-759-472-04	s	IC 74VHC74MTCX
IC37	8-759-471-91	s	IC 74VHC04MTCX
IC38	8-759-185-67	s	IC TC74VHC20F(EL)
IC39	8-759-472-18	s	IC 74VHC138MTCX
IC41	8-759-389-30	s	IC 74LCX32MTCX
IC43	8-759-287-54	s	IC TL084CPW-E20
IC44	8-759-287-54	s	IC TL084CPW-E20
IC45	8-759-380-56	s	IC STK10C68-S35
IC46	8-759-182-95	s	IC HD151015T
IC47	8-759-076-06	s	IC TL064CPW
IC48	8-759-386-28	s	IC 74LCX00MTCX
IC51	8-759-537-92	s	IC MC74HC4053DTR2
IC53	8-752-356-44	s	IC CXD2306Q
IC55	8-759-456-26	s	IC 74LCX541MTCX
IC56	8-759-456-26	s	IC 74LCX541MTCX
IC57	8-759-456-26	s	IC 74LCX541MTCX
IC58	8-759-456-26	s	IC 74LCX541MTCX
IC59	8-752-363-60	s	IC CXD2307R-T6
IC60	8-759-447-19	s	IC AD8041AR
IC62	8-759-082-61	s	IC TC4W53FU
IC63	8-759-471-91	s	IC 74VHC04MTCX
IC64	8-759-447-19	s	IC AD8041AR
IC66	8-752-334-64	s	IC CXD1171M
IC67	8-759-164-94	s	IC TLC0820ACDW
IC68	8-759-456-26	s	IC 74LCX541MTCX
IC69	8-759-049-86	s	IC SN74HCT244APW-E05
IC70	8-759-082-61	s	IC TC4W53FU
IC72	8-759-389-30	s	IC 74LCX32MTCX
IC73	8-759-082-61	s	IC TC4W53FU
IC74	8-759-471-85	s	IC 74VHC00MTCX
IC75	8-759-173-16	s	IC TL062CPW
IC400	8-759-389-28	s	IC 74LCX14MTCX
L5	1-406-864-21	s	INDUCTOR 0uH
L8	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L9	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L10	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L11	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L15	1-410-385-11	s	INDUCTOR, CHIP 22uH
L16	1-410-369-11	s	INDUCTOR CHIP 1uH
L17	1-410-385-11	s	INDUCTOR, CHIP 22uH
L18	1-410-369-11	s	INDUCTOR CHIP 1uH
L19	1-410-389-31	s	INDUCTOR, CHIP 47uH
L20	1-410-392-11	s	INDUCTOR, CHIP 82uH
L21	1-410-369-11	s	INDUCTOR CHIP 1uH
L22	1-410-385-11	s	INDUCTOR, CHIP 22uH
L23	1-410-381-11	s	INDUCTOR, CHIP 10uH
L24	1-410-385-11	s	INDUCTOR, CHIP 22uH
L25	1-410-373-31	s	INDUCTOR CHIP 2.2uH
L400	1-410-389-31	s	INDUCTOR, CHIP 47uH

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Ref. No. or Q'ty	Part No.	SP	Description
L401	1-410-392-11	s	INDUCTOR, CHIP 82uH
Q1	8-729-820-86	s	TRANSISTOR 2SB1121-ST
Q2	8-729-820-86	s	TRANSISTOR 2SB1121-ST
Q3	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q4	8-729-920-48	s	TRANSISTOR IMH2
Q5	8-729-820-86	s	TRANSISTOR 2SB1121-ST
Q6	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q7	8-729-920-48	s	TRANSISTOR IMH2
Q8	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q9	8-729-122-63	s	TRANSISTOR 2SA1226
Q10	8-729-142-90	s	TRANSISTOR 2SK853-K5
Q11	8-729-122-63	s	TRANSISTOR 2SA1226
Q12	8-729-142-90	s	TRANSISTOR 2SK853-K5
Q13	8-729-122-63	s	TRANSISTOR 2SA1226
Q14	8-729-142-90	s	TRANSISTOR 2SK853-K5
Q15	8-729-122-63	s	TRANSISTOR 2SA1226
Q16	8-729-122-63	s	TRANSISTOR 2SA1226
Q17	8-729-122-63	s	TRANSISTOR 2SA1226
Q18	8-729-403-32	s	TRANSISTOR XN6534
Q19	8-729-117-32	s	TRANSISTOR 2SC4177
Q20	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q21	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q22	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q23	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q24	8-729-143-07	s	TRANSISTOR 2SA1610-YY33
Q25	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q26	8-729-122-63	s	TRANSISTOR 2SA1226
Q400	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q401	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q402	8-729-117-32	s	TRANSISTOR 2SC4177
Q403	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q404	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q405	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q406	8-729-024-56	s	TRANSISTOR 2SA1808
Q407	8-729-024-56	s	TRANSISTOR 2SA1808
Q408	8-729-403-32	s	TRANSISTOR XN6534
R1	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R2	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R3	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R4	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R6	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R7	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R8	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R9	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R10	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R11	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R12	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R13	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R14	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R16	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R17	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R18	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R19	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R20	1-218-677-11	s	METAL, CHIP 240 0.50% 1/16W
R21	1-218-723-91	s	METAL, CHIP 20K 0.50% 1/16W
R22	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R23	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R24	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R25	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R27	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R28	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R29	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R30	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R31	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R32	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R33	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R34	1-218-729-11	s	METAL, CHIP 36K 0.50% 1/16W
R35	1-218-723-91	s	METAL, CHIP 20K 0.50% 1/16W
R36	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R37	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R38	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R39	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R40	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R41	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R42	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R43	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R44	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R45	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R46	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R47	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R48	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R49	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R50	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R51	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R53	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R54	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R56	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R58	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R59	1-218-677-11	s	METAL, CHIP 240 0.50% 1/16W
R60	1-218-723-91	s	METAL, CHIP 20K 0.50% 1/16W
R61	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R62	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R63	1-218-674-11	s	METAL, CHIP 180 0.50% 1/16W
R64	1-218-674-11	s	METAL, CHIP 180 0.50% 1/16W
R65	1-218-674-11	s	METAL, CHIP 180 0.50% 1/16W
R66	1-218-662-11	s	METAL, CHIP 56 0.50% 1/16W
R68	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R73	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R75	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R76	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R77	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R78	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R79	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R80	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R81	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R82	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R83	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R84	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R85	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R87	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R88	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R91	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R92	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R95	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R96	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R97	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R99	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R100	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R104	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R107	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R108	1-218-723-91	s	METAL, CHIP 20K 0.50% 1/16W
R109	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R110	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R111	1-218-723-91	s	METAL, CHIP 20K 0.50% 1/16W
R112	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R113	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R114	1-218-723-91	s	METAL, CHIP 20K 0.50% 1/16W
R115	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R116	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R117	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R118	1-218-705-11	s	METAL, CHIP 3.6K 0.50% 1/16W
R119	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R120	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R121	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R122	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R123	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R124	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R125	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R126	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R127	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R128	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R129	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R130	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R131	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R132	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R133	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R134	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R135	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R142	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R143	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R144	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R145	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R146	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R147	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R148	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R149	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R150	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R152	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R153	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R154	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R155	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R156	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R157	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R158	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R159	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R160	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R161	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R162	1-218-729-11	s	METAL, CHIP 36K 0.50% 1/16W
R163	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R164	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R165	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R167	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R168	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R169	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R170	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R171	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R172	1-218-718-11	s	METAL, CHIP 12K 0.50% 1/16W
R173	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R174	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R175	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R176	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R177	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R178	1-218-709-11	s	METAL, CHIP 5.1K 0.50% 1/16W
R179	1-218-697-11	s	METAL, CHIP 1.6K 0.50% 1/16W
R180	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R181	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R182	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R183	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R184	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R185	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R186	1-218-707-11	s	METAL, CHIP 4.3K 0.50% 1/16W
R187	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R188	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R191	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R192	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R193	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R194	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R195	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R196	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R197	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R198	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R200	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R201	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R202	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R204	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R205	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R208	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R209	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R210	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R211	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R212	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R213	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R215	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R216	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R217	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R218	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R219	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R220	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R221	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R222	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R223	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R224	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R225	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R226	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R227	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R228	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R229	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R230	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R231	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R232	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R233	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R234	1-218-693-11	s	METAL, CHIP 1.1K 0.50% 1/16W
R236	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R238	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R239	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R240	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R241	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R243	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R244	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R245	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R246	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R247	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R248	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R249	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R250	1-218-727-11	s	METAL, CHIP 30K 0.50% 1/16W
R251	1-218-723-91	s	METAL, CHIP 20K 0.50% 1/16W
R253	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R254	1-218-695-11	s	METAL, CHIP 1.3K 0.50% 1/16W
R255	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R256	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R258	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R300	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R301	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R302	1-218-656-11	s	METAL, CHIP 33 0.50% 1/16W
R303	1-218-660-91	s	METAL, CHIP 47 0.50% 1/16W
R335	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R336	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R337	1-218-679-91	s	METAL, CHIP 300 0.50% 1/16W
R340	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R341	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R342	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R343	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R344	1-218-679-91	s	METAL, CHIP 300 0.50% 1/16W
R351	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R352	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R353	1-218-679-91	s	METAL, CHIP 300 0.50% 1/16W
R354	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R357	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R400	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R401	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R402	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R403	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R404	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R405	1-218-697-11	s	METAL, CHIP 1.6K 0.50% 1/16W
R406	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R407	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R408	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R410	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R450	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R451	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R452	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R453	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R454	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R455	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R456	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R501	1-218-697-11	s	METAL, CHIP 1.6K 0.50% 1/16W
R502	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R503	1-218-711-11	s	METAL, CHIP 6.2K 0.50% 1/16W
R505	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R506	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R510	1-215-437-00	s	METAL 4.7K 1% 1/6W BVP-570: S/N 15491 and higher BVP-570WSPK: S/N 55211 and higher

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Ref. No. or Q'ty	Part No.	SP	Description
R601	1-218-727-11	s	METAL 30K 0.50% 1/16W BVP-570: S/N 15491 and higher BVP-570WSPK: S/N 55211 and higher
RB1	1-236-907-11	s	RESISTOR BLOCK, CHIP 100KX4
RB2	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB3	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB4	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB5	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB6	1-239-306-11	s	RESISTOR BLOCK, CHIP 10kx8
RB7	1-239-790-12	s	RESISTOR BLOCK, 5K
RB8	1-239-790-12	s	RESISTOR BLOCK, 5K
RB9	1-239-790-12	s	RESISTOR BLOCK, 5K
RB10	1-239-791-12	s	RESISTOR BLOCK, 5K
RB11	1-239-791-12	s	RESISTOR BLOCK, 5K
RB12	1-239-791-12	s	RESISTOR BLOCK, 5K
RB13	1-239-790-12	s	RESISTOR BLOCK, 5K
RB14	1-239-306-11	s	RESISTOR BLOCK, CHIP 10kx8
RB15	1-239-306-11	s	RESISTOR BLOCK, CHIP 10kx8
RB16	1-239-306-11	s	RESISTOR BLOCK, CHIP 10kx8
RB17	1-239-306-11	s	RESISTOR BLOCK, CHIP 10kx8
RB18	1-239-306-11	s	RESISTOR BLOCK, CHIP 10kx8
RB23	1-236-908-11	s	RESISTOR, NETWORK, CHIP 10k
RB24	1-236-908-11	s	RESISTOR, NETWORK, CHIP 10k
RB25	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB26	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB27	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB28	1-236-907-11	s	RESISTOR BLOCK, CHIP 100KX4
RB37	1-239-309-11	s	RESISTOR BLOCK, CHIP 100KX8
RB42	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB43	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB44	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB45	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB46	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB47	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB48	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RB49	1-239-409-11	s	RESISTOR BLOCK, CHIP 47X4
RV1	1-241-828-21	s	RES, ADJ, METAL 500
RV2	1-241-828-21	s	RES, ADJ, METAL 500
RV3	1-241-828-21	s	RES, ADJ, METAL 500

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Ref. No. or Q'ty	Part No.	SP	Description
C1	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C2	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C3	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C4	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C5	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C6	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C7	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C8	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C9	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C10	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C11	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C12	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C13	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C14	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C15	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C16	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C17	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C18	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C19	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C20	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C21	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C22	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C23	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C24	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C25	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C26	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

SG-234 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8272-564-A	o	MOUNTED CIRCUIT BOARD, SG-234
1pc	3-692-127-02	o	PANEL,SG-234 PC BOARD
1pc	3-724-753-01	o	RING
6pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C2	1-135-159-21	s	TANTALUM, CHIP 10uF 10% 20V
C3	1-135-214-21	s	TANTALUM, CHIP 4.7uF 20% 20V
C4	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C5	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C6	1-135-164-21	s	TANTALUM, CHIP 22uF 10% 16V
C7	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C8	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C9	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C10	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C11	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C12	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C13	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C14	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C15	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C23	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C24	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C25	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C26	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C27	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C28	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C29	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C30	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C31	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C32	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C33	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C34	1-162-966-11	s	CERAMIC, CHIP 0.0022uF 10% 50V
C35	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C36	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C37	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C38	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C39	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C40	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C41	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C42	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C43	1-162-925-11	s	CERAMIC, CHIP 68PF 5% 50V
C45	1-135-211-11	s	TANTALUM, CHIP 6.8uF 20% 6.3V
C46	1-164-346-11	s	CERAMIC 1uF 16V
C47	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C48	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C49	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C50	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C51	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C52	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C53	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C54	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C56	1-165-128-11	s	CERAMIC, CHIP 0.22uF 16V
C57	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C58	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C59	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C60	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C62	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C63	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C64	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C65	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V

Ref. No. or Q'ty	Part No.	SP	Description
C66	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C67	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C68	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C69	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C70	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C71	1-135-076-21	s	TANTALUM, CHIP 1uF 10% 35V
C72	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C73	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C74	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C75	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C76	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C77	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C78	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C79	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C80	1-164-315-11	s	CERAMIC, CHIP 470PF 5% 50V
C81	1-128-391-11	s	ELECT 330uF 20% 6.3V
C82	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C83	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C85	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C87	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C88	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C89	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C90	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C92	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C93	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C94	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C95	1-107-688-11	s	TANTALUM, CHIP 1.5uF 20% 25V
C96	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C97	1-135-179-21	s	TANTALUM, CHIP 2.2uF 10% 16V
C98	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C99	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C100	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C200	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C201	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
D1	8-719-029-63	s	DIODE RD4.3UH-T1
D2	8-719-029-63	s	DIODE RD4.3UH-T1
D3	8-719-948-48	s	DIODE HSM88AS-TL
D4	8-719-029-63	s	DIODE RD4.3UH-T1
D5	8-719-820-41	s	DIODE 1SS302
D6	8-719-404-35	s	DIODE MA141WK
D7	8-719-404-35	s	DIODE MA141WK
D8	8-719-041-68	s	DIODE RD3.3UH-T1
D10	8-719-948-48	s	DIODE HSM88AS-TL
D11	8-719-820-41	s	DIODE 1SS302
D12	8-719-948-48	s	DIODE HSM88AS-TL
D13	8-719-948-48	s	DIODE HSM88AS-TL
D14	8-719-800-76	s	DIODE 1SS226
D200	8-719-820-41	s	DIODE 1SS302
D201	8-719-948-48	s	DIODE HSM88AS-TL
FL1	1-239-756-11	s	FILTER, LOW-PASS
IC3	8-759-076-06	s	IC TL064CPW
IC5	8-759-254-49	s	IC EL4581CS-TE2
IC8	8-759-082-57	s	IC TC7W04FU
IC11	8-759-082-58	s	IC TC7W08FU
IC12	8-759-064-36	s	IC MB88346BPFV
IC13	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC16	8-752-360-44	s	IC CXK1203AR-T4
IC17	8-759-082-61	s	IC TC4W53FU

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Ref. No. or Q'ty	Part No.	SP	Description
IC18	8-759-369-92	s	IC M51958AFP600D
IC20	8-759-058-62	s	IC TC7S08FU(TE85R)
IC21	8-759-086-41	s	IC X24C02S-3.0
IC22	8-759-271-86	s	IC TC7SH04FU
IC25	8-759-524-27	s	IC TC74VHC244FT(EL)
IC30	8-759-524-27	s	IC TC74VHC244FT(EL)
IC31	8-759-271-86	s	IC TC7SH04FU
IC32	8-759-076-06	s	IC TL064CPW
IC33	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC34	8-759-184-64	s	IC TC4W66FU
IC35	8-759-049-86	s	IC SN74HCT244APW-E05
IC36	8-759-523-04	s	IC TC74HC4538AFT(EL)
IC37	8-759-082-58	s	IC TC7W08FU
IC38	8-759-083-94	s	IC TC7W74FU
IC39	8-759-195-81	s	IC TC7S86FU
IC40	8-759-082-60	s	IC TC7S66FU
IC41	8-759-082-61	s	IC TC4W53FU
IC42	8-759-049-86	s	IC SN74HCT244APW-E05
IC43	8-759-058-54	s	IC TC7S00FU(TE85R)
IC44	8-759-082-61	s	IC TC4W53FU
IC45	8-759-271-86	s	IC TC7SH04FU
IC46	8-759-082-61	s	IC TC4W53FU
IC47	8-759-082-61	s	IC TC4W53FU
IC48	8-759-173-16	s	IC TL062CPW
IC200	8-759-523-95	s	IC TC74VHC74FT(EL)
IC201	8-759-058-58	s	IC TC7S04FU(TE85R)
IC202	8-759-058-64	s	IC TC7S32FU(TE85R)
IC203	8-759-058-62	s	IC TC7S08FU(TE85R)
IC204	8-759-082-61	s	IC TC4W53FU
IC206	8-759-173-16	s	IC TL062CPW
IC207	8-759-058-55	s	IC TC7S02FU-TE85L
L1	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L2	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L4	1-410-737-31	s	INDUCTOR CHIP 0.47uH
L5	1-410-385-11	s	INDUCTOR, CHIP 22uH
L6	1-410-385-11	s	INDUCTOR, CHIP 22uH
L7	1-410-385-11	s	INDUCTOR, CHIP 22uH
L8	1-410-385-11	s	INDUCTOR, CHIP 22uH
L9	1-410-385-11	s	INDUCTOR, CHIP 22uH
Q1	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q2	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q4	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q5	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q6	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q7	8-729-117-32	s	TRANSISTOR 2SC4177
Q8	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q9	8-729-117-32	s	TRANSISTOR 2SC4177
Q10	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q11	8-729-117-32	s	TRANSISTOR 2SC4177
Q12	8-729-403-29	s	TRANSISTOR XN6435
Q14	8-729-117-32	s	TRANSISTOR 2SC4177
Q15	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q16	8-729-118-56	s	TRANSISTOR 2SK852-X2
Q17	8-729-117-32	s	TRANSISTOR 2SC4177
Q18	8-729-920-48	s	TRANSISTOR IMH2
Q20	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q21	8-729-118-56	s	TRANSISTOR 2SK852-X2
Q22	8-729-029-14	s	TRANSISTOR DTC144EUA-T106

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Ref. No. or Q'ty	Part No.	SP	Description
Q23	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q24	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q25	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q26	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q200	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q201	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q202	8-729-216-22	s	TRANSISTOR 2SA1162
Q203	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q204	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q205	8-729-117-32	s	TRANSISTOR 2SC4177
R1	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R2	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R3	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R5	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R6	1-218-677-11	s	METAL, CHIP 240 0.50% 1/16W
R7	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R8	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R9	1-218-729-11	s	METAL, CHIP 36K 0.50% 1/16W
R10	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R11	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R15	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R16	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R17	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R18	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R21	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R22	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R23	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R24	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R25	1-216-831-11	s	METAL, CHIP 6.8K 5% 1/16W
R26	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R27	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R28	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R29	1-218-718-11	s	METAL, CHIP 12K 0.50% 1/16W
R30	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R31	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R32	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R33	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R34	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R35	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R36	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R37	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R38	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R39	1-218-736-11	s	METAL, CHIP 68K 0.50% 1/16W
R40	1-218-734-11	s	METAL, CHIP 56K 5% 1/16W
R41	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R42	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R43	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R44	1-218-690-11	s	METAL, CHIP 820 0.50% 1/16W
R45	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R46	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R47	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R48	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R49	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R50	1-216-817-11	s	METAL, CHIP 470 5% 1/16W
R51	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R52	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R54	1-216-855-11	s	METAL, CHIP 680K 5% 1/16W
R55	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R56	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R57	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R58	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R59	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R60	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R61	1-218-678-11	s	METAL, CHIP 270 0.50% 1/16W
R62	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R63	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R64	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R65	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R66	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R67	1-218-881-11	s	METAL, CHIP 27K 0.50% 1/16W
R68	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R69	1-218-719-11	s	METAL, CHIP 13K 0.50% 1/16W
R71	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R77	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R78	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R79	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R80	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R81	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R83	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R84	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R85	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R86	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R90	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R92	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R95	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R96	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R97	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R98	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R99	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R100	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R101	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R102	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R103	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R104	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R105	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R106	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R107	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R108	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R109	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R110	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R111	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R112	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R113	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R114	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R115	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R116	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R117	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R118	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R119	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R121	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R122	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R123	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R124	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R126	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R127	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R128	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R129	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R130	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R131	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R132	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R133	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R134	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R135	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R136	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R137	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R138	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R139	1-218-697-11	s	METAL, CHIP 1.6K 0.50% 1/16W
R140	1-218-744-11	s	METAL, CHIP 150K 0.50% 1/16W
R141	1-218-713-11	s	METAL, CHIP 7.5K 0.50% 1/16W
R144	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R145	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R146	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R148	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R149	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R150	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R151	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R152	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R153	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R154	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R200	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R201	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R202	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R203	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R204	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R205	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R206	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R207	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R208	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R209	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R210	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R211	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
RB1	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB2	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB3	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB4	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB5	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4
RB10	1-239-409-11	s	RESISTOR BLOCK (CHIP) 47X4

SW-730 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-657-443-21	o	PRINTED WIRING BOARD, SW-730
C1	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C3	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
CN801	1-764-082-21	s	PIN, CONNECTOR (PC BOARD) 11P
D1	8-719-106-43	s	DIODE RD9.1M-B1
IC1	8-759-175-04	s	IC PCF8574T-T
R1	1-216-827-11	s	METAL, CHIP 3.3K 5% 1/16W
R2	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R3	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R4	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R5	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R6	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R7	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R8	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R9	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R10	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R11	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R12	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R13	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R14	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R15	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
S1	1-571-415-11	s	SWITCH, TOGGLE
S2	1-571-415-11	s	SWITCH, TOGGLE
S3	1-571-415-11	s	SWITCH, TOGGLE
S4	1-571-415-11	s	SWITCH, TOGGLE

SW-731 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-657-444-21	o	PRINTED WIRING BOARD, SW-731
C1	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C3	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C4	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
CN501	1-695-207-21	o	PIN, CONNECTOR (PC BOARD) 6P
IC1	8-759-175-04	s	IC PCF8574T-T
R1	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R2	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R3	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R4	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R5	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R6	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R7	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R8	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R9	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R10	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R11	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
RV1	1-223-686-11	s	RES, VAR, CARBON 5K/5K
S1	1-571-416-11	s	SWITCH, TOGGLE
S2	1-571-679-11	s	SWITCH, TOGGLE
S3	1-570-282-21	s	SWITCH, PUSH

SW-732 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-657-442-22	o	PRINTED WIRING BOARD, SW-732
C1	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C2	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
CN301	1-750-635-21	o	PIN, CONNECTOR (PC BOARD) 5P
IC1	8-759-175-04	s	IC PCF8574T-T
R1	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R2	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R3	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R4	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R5	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R6	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R7	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R8	1-216-849-11	s	METAL, CHIP 220K 5% 1/16W
R9	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R10	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
S1	1-570-985-11	s	SWITCH, TOGGLE
S2	1-570-985-11	s	SWITCH, TOGGLE
S3	1-571-396-11	s	SWITCH, TOGGLE

SW-733 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-657-445-22	o	PRINTED WIRING BOARD, SW-733
CN701	1-764-079-21	s	PIN, CONNECTOR (PC BOARD) 4P
S1	1-473-315-21	s	ENCODER, ROTARY

SW-742 Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-657-446-21	o	PRINTED WIRING BOARD, SW-742
CN601	1-764-078-11	s	PIN, CONNECTOR (PC BOARD) 3P
S1	1-554-088-00	s	SWITCH, PUSH

VA-163A Board

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8319-646-A	o	MOUNTED CIRCUIT BOARD, VA-163A
1pc	3-692-125-02	o	PANEL, VA-163 PC BOARD
1pc	3-724-753-01	o	RING
6pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C2	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C3	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C4	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C5	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C6	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C7	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C8	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C9	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C10	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C11	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C12	1-126-391-11	s	ELECT 47uF 20% 6.3V
C13	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C14	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C15	1-135-125-21	s	TANTALUM, CHIP 33uF 20% 10V
C16	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C17	1-126-391-11	s	ELECT 47uF 20% 6.3V
C18	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C19	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C20	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C21	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C22	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C23	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C24	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C25	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C26	1-164-217-11	s	CERAMIC, CHIP 150PF 5% 50V
C27	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C30	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C31	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C32	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C41	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C42	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C43	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C44	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C45	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C46	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C47	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C48	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C49	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C50	1-135-211-11	s	TANTALUM, CHIP 6.8uF 20% 6.3V
C51	1-135-211-11	s	TANTALUM, CHIP 6.8uF 20% 6.3V
C52	1-104-559-11	s	FILM, CHIP 0.047uF 5% 16V
C53	1-164-315-11	s	CERAMIC, CHIP 470PF 5% 50V
C54	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C55	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C56	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C57	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C58	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C59	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C60	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C61	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C62	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C63	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C64	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C65	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V

Ref. No. or Q'ty	Part No.	SP	Description
C66	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C67	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C68	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C69	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C70	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C71	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C72	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C73	1-162-918-11	s	CERAMIC, CHIP 18PF 5% 50V
C124	1-107-685-11	s	TANTALUM, CHIP 15uF 20% 6.3V
C125	1-107-685-11	s	TANTALUM, CHIP 15uF 20% 6.3V
C200	1-135-214-21	s	TANTALUM, CHIP 4.7uF 20% 20V
C201	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C202	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C203	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C204	1-135-157-21	s	TANTALUM, CHIP 10uF 10% 6.3V
C205	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C207	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C208	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C209	1-162-908-11	s	CERAMIC, CHIP 3PF 50V
C211	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C212	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C214	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C215	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C216	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C217	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C218	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C219	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C220	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C221	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C223	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C224	1-104-608-11	s	ELECT, CHIP 33uF 20% 6.3V\
C225	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C226	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C227	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C228	1-135-162-21	s	TANTALUM, CHIP 33uF 10% 6.3V
C229	1-135-157-21	s	TANTALUM, CHIP 10uF 10% 6.3V
C230	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C231	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C232	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C233	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C234	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C235	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C236	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C237	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C238	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C239	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C240	1-162-924-11	s	CERAMIC 56PF 5% 50V
C242	1-135-092-21	s	TANTALUM, CHIP 3.3uF 10% 16V
C243	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C259	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C300	1-135-214-21	s	TANTALUM, CHIP 4.7uF 20% 20V
C301	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C302	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C303	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C304	1-135-157-21	s	TANTALUM, CHIP 10uF 10% 6.3V
C305	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C307	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C308	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C309	1-162-908-11	s	CERAMIC, CHIP 3PF 50V

(VA-163A Board)

Ref. No. or Q'ty	Part No.	SP	Description
C311	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C312	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C314	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C315	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C316	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C317	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C318	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C319	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C320	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C321	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C323	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C324	1-104-608-11	s	ELECT, CHIP 33uF 20% 6.3V\
C325	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C326	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C327	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C328	1-135-162-21	s	TANTALUM, CHIP 33uF 10% 6.3V
C329	1-135-157-21	s	TANTALUM, CHIP 10uF 10% 6.3V
C330	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C331	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C332	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C333	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C334	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C335	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C336	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C337	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C338	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C339	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C340	1-162-924-11	s	CERAMIC 56PF 5% 50V
C342	1-135-092-21	s	TANTALUM, CHIP 3.3uF 10% 16V
C343	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C359	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C400	1-135-214-21	s	TANTALUM, CHIP 4.7uF 20% 20V
C401	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C402	1-135-165-11	s	TANTALUM, CHIP 33uF 10% 16V
C403	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C404	1-135-157-21	s	TANTALUM, CHIP 10uF 10% 6.3V
C405	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C407	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C408	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C409	1-162-908-11	s	CERAMIC, CHIP 3PF 50V
C411	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C412	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C414	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C415	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C416	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C417	1-162-909-11	s	CERAMIC, CHIP 4PF 0.25PF 50V
C418	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C419	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C420	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C421	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C423	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C424	1-104-608-11	s	ELECT, CHIP 33uF 20% 6.3V\
C425	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C426	1-135-217-21	s	TANTALUM, CHIP 15uF 20% 6.3V
C427	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C428	1-135-162-21	s	TANTALUM, CHIP 33uF 10% 6.3V
C429	1-135-157-21	s	TANTALUM, CHIP 10uF 10% 6.3V
C430	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C431	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C432	1-104-852-11	s	TANTALUM, CHIP 22uF 20% 10V
C433	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C434	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C435	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C436	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C437	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C438	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C439	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C440	1-162-924-11	s	CERAMIC 56PF 5% 50V
C442	1-135-092-21	s	TANTALUM, CHIP 3.3uF 10% 16V
C443	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C459	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
CT200	1-141-311-11	s	CAP, VAR, TRIMMER
CT300	1-141-311-11	s	CAP, VAR, TRIMMER
CT400	1-141-311-11	s	CAP, VAR, TRIMMER
D1	8-719-029-63	s	DIODE RD4.3UH-T1
D2	8-719-029-63	s	DIODE RD4.3UH-T1
D3	8-719-029-63	s	DIODE RD4.3UH-T1
D4	8-719-029-63	s	DIODE RD4.3UH-T1
D5	8-719-820-41	s	DIODE 1SS302
D7	8-719-974-76	s	DIODE HSM107S
D8	8-719-820-41	s	DIODE 1SS302
D9	8-719-820-41	s	DIODE 1SS302
D10	8-719-820-41	s	DIODE 1SS302
FL200	1-402-639-11	s	FILTER, TRAP
FL300	1-402-639-11	s	FILTER, TRAP
FL400	1-402-639-11	s	FILTER, TRAP
IC1	8-759-076-06	s	IC TL064CPW
IC3	8-759-066-68	s	IC REF-03GS
IC5	8-759-523-04	s	IC TC74HC4538AFT(EL)
IC6	8-759-175-02	s	IC TL074CPW
IC7	8-759-058-64	s	IC TC7S32FU(TE85R)
IC8	8-759-082-60	s	IC TC7S66FU
IC9	8-759-085-67	s	IC LM339NS
IC10	8-759-058-58	s	IC TC7S04FU(TE85R)
IC11	8-759-058-58	s	IC TC7S04FU(TE85R)
IC12	8-759-175-02	s	IC TL074CPW
IC13	8-759-082-60	s	IC TC7S66FU
IC14	8-759-082-60	s	IC TC7S66FU
IC15	8-759-076-06	s	IC TL064CPW
IC16	8-759-326-65	s	IC MP7670AS-TE2
IC17	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC18	8-759-326-65	s	IC MP7670AS-TE2
IC19	8-759-175-02	s	IC TL074CPW
IC20	8-759-233-44	s	IC TC74HC595AF
IC21	8-759-064-36	s	IC MB88346BPFV
IC22	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC23	8-759-049-60	s	IC SN74HC08APW-E05
IC24	8-759-059-50	s	IC MB88351PFV
IC25	8-759-058-58	s	IC TC7S04FU(TE85R)
IC26	8-759-086-41	s	IC X24C02S-3.0
IC27	8-759-058-62	s	IC TC7S08FU(TE85R)
IC200	8-759-076-06	s	IC TL064CPW
IC201	8-759-082-61	s	IC TC4W53FU
IC202	8-752-068-64	s	IC CXA1486Q-TH
IC203	8-759-082-61	s	IC TC4W53FU
IC204	8-759-058-62	s	IC TC7S08FU(TE85R)

Ref. No. or Q'ty	Part No.	SP	Description
IC300	8-759-076-06	s	IC TL064CPW
IC301	8-759-082-61	s	IC TC4W53FU
IC302	8-752-068-64	s	IC CXA1486Q-TH
IC303	8-759-082-61	s	IC TC4W53FU
IC304	8-759-058-62	s	IC TC7S08FU(TE85R)
IC400	8-759-076-06	s	IC TL064CPW
IC401	8-759-082-61	s	IC TC4W53FU
IC402	8-752-068-64	s	IC CXA1486Q-TH
IC403	8-759-082-61	s	IC TC4W53FU
IC404	8-759-058-62	s	IC TC7S08FU(TE85R)
L1	1-410-385-11	s	INDUCTOR, CHIP 22uH
L2	1-410-385-11	s	INDUCTOR, CHIP 22uH
Q1	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q2	8-729-820-86	s	TRANSISTOR 2SB1121-ST
Q3	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q4	8-729-117-32	s	TRANSISTOR 2SC4177
Q5	8-729-402-78	s	TRANSISTOR XN6401
Q7	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q10	8-729-402-78	s	TRANSISTOR XN6401
Q11	8-729-402-19	s	TRANSISTOR XN6501
Q12	8-729-402-19	s	TRANSISTOR XN6501
Q13	8-729-402-19	s	TRANSISTOR XN6501
Q14	8-729-402-78	s	TRANSISTOR XN6401
Q200	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q201	8-729-039-89	s	TRANSISTOR 2SC3082KT146Q
Q202	8-729-122-63	s	TRANSISTOR 2SA1226
Q203	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q204	8-729-122-63	s	TRANSISTOR 2SA1226
Q205	8-729-122-63	s	TRANSISTOR 2SA1226
Q206	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q207	8-729-143-07	s	TRANSISTOR 2SA1610-YY33
Q208	8-729-117-32	s	TRANSISTOR 2SC4177
Q209	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q210	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q211	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q213	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q214	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q215	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q216	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q217	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q218	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q219	8-729-402-19	s	TRANSISTOR XN6501
Q220	8-729-402-19	s	TRANSISTOR XN6501
Q300	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q301	8-729-039-89	s	TRANSISTOR 2SC3082KT146Q
Q302	8-729-122-63	s	TRANSISTOR 2SA1226
Q303	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q304	8-729-122-63	s	TRANSISTOR 2SA1226
Q305	8-729-122-63	s	TRANSISTOR 2SA1226
Q306	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q307	8-729-143-07	s	TRANSISTOR 2SA1610-YY33
Q308	8-729-117-32	s	TRANSISTOR 2SC4177
Q309	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q310	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q311	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q313	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q314	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q315	8-729-117-73	s	TRANSISTOR 2SC4178-F14

Ref. No. or Q'ty	Part No.	SP	Description
Q316	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q317	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q318	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q319	8-729-402-19	s	TRANSISTOR XN6501
Q320	8-729-402-19	s	TRANSISTOR XN6501
Q400	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q401	8-729-039-89	s	TRANSISTOR 2SC3082KT146Q
Q402	8-729-122-63	s	TRANSISTOR 2SA1226
Q403	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q404	8-729-122-63	s	TRANSISTOR 2SA1226
Q405	8-729-122-63	s	TRANSISTOR 2SA1226
Q406	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q407	8-729-143-07	s	TRANSISTOR 2SA1610-YY33
Q408	8-729-117-32	s	TRANSISTOR 2SC4177
Q409	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q410	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q411	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q413	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q414	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q415	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q416	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q417	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q418	8-729-117-16	s	TRANSISTOR 2SA1611-M6
Q419	8-729-402-19	s	TRANSISTOR XN6501
Q420	8-729-402-19	s	TRANSISTOR XN6501
R1	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R2	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R3	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R4	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R5	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R6	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R7	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R8	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R9	1-216-823-11	s	METAL, CHIP 1.5K 5% 1/16W
R10	1-218-724-11	s	METAL, CHIP 22K 5% 1/16W
R11	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R12	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R13	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R14	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R15	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R16	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R17	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R18	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R19	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R20	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R21	1-216-827-11	s	METAL, CHIP 3.3K 5% 1/16W
R22	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R23	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R24	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R25	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R26	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R27	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R28	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R29	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R30	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R31	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R35	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R36	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R37	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R38	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R39	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R40	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R41	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R42	1-218-718-11	s	METAL, CHIP 12K 0.50% 1/16W
R43	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R44	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R45	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R46	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R47	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R48	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R49	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R50	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R51	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R52	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R53	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R54	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R55	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R56	1-218-746-11	s	METAL, CHIP 180K 0.50% 1/16W
R57	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R58	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R59	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R60	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R61	1-218-776-11	s	METAL, CHIP 1M 0.50% 1/10W
R62	1-216-853-11	s	METAL, CHIP 470K 5% 1/16W
R63	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R64	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R65	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R66	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R67	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R68	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R69	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R70	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R71	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R72	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R73	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R74	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R75	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R76	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R77	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R78	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R79	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R80	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R81	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R82	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R83	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R84	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R85	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R86	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R87	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R88	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R89	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R90	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R91	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R92	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R93	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R94	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R95	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R96	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R97	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R98	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R99	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R100	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R101	1-218-718-11	s	METAL, CHIP 12K 0.50% 1/16W
R102	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R103	1-218-731-11	s	METAL, CHIP 43K 0.50% 1/16W
R104	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R105	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R106	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R107	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R108	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R109	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R110	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R111	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R112	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R113	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R114	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R115	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R116	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R117	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R118	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R120	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R121	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R122	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R123	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R200	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R201	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R202	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R203	1-216-830-11	s	METAL, CHIP 5.6K 5% 1/16W
R204	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R205	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R206	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R207	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R208	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R209	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R210	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R211	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R212	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R213	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R214	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R215	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R216	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R217	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R218	1-218-717-11	s	METAL, CHIP 11K 0.50% 1/16W
R219	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R222	1-218-690-11	s	METAL, CHIP 820 0.50% 1/16W
R223	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R224	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R225	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R226	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R227	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R228	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R229	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R230	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R231	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R232	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R233	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R234	1-216-809-11	s	METAL, CHIP 100 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R235	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R236	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R237	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R238	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R239	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R240	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R241	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R242	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R243	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R244	1-218-687-11	s	METAL, CHIP 620 0.50% 1/16W
R245	1-218-751-11	s	METAL, CHIP 300K 0.50% 1/16W
R246	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R247	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R248	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R249	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R250	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R251	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R252	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R253	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R254	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R255	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R256	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R257	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R258	1-218-717-11	s	METAL, CHIP 11K 0.50% 1/16W
R259	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R260	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R261	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R262	1-218-727-11	s	METAL, CHIP 30K 0.50% 1/16W
R263	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R264	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R265	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R266	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R267	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R268	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R269	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R270	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R271	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R272	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R280	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R281	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R300	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R301	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R302	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R303	1-216-830-11	s	METAL, CHIP 5.6K 5% 1/16W
R304	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R305	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R306	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R307	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R308	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R309	1-218-719-11	s	METAL, CHIP 13K 0.50% 1/16W
R310	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R311	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R312	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R313	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R314	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R315	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R316	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R317	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R318	1-218-717-11	s	METAL, CHIP 11K 0.50% 1/16W

Ref. No. or Q'ty	Part No.	SP	Description
R319	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R322	1-218-690-11	s	METAL, CHIP 820 0.50% 1/16W
R323	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R324	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R325	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R326	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R327	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R328	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R329	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R330	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R331	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R332	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R333	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R334	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R335	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R336	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R337	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R338	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R339	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R340	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R341	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R342	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R343	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R344	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R345	1-218-687-11	s	METAL, CHIP 620 0.50% 1/16W
R346	1-218-750-11	s	METAL, CHIP 270K 0.50% 1/16W
R347	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R348	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R349	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R350	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R351	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R352	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R353	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R354	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R355	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R356	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R357	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R358	1-218-717-11	s	METAL, CHIP 11K 0.50% 1/16W
R359	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R360	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R361	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R362	1-218-727-11	s	METAL, CHIP 30K 0.50% 1/16W
R363	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R364	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R365	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R366	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R367	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R368	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R369	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R370	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R371	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R372	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R380	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R381	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R400	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R401	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R402	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R403	1-216-830-11	s	METAL, CHIP 5.6K 5% 1/16W
R404	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W

(VA-163A Board)

Ref. No. or Q'ty	Part No.	SP	Description
R405	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R406	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R407	1-218-701-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R408	1-218-719-11	s	METAL, CHIP 13K 0.50% 1/16W
R409	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R410	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R411	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R412	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R413	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R414	1-218-644-11	s	METAL, CHIP 10 0.50% 1/16W
R415	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R416	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R417	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R418	1-218-717-11	s	METAL, CHIP 11K 0.50% 1/16W
R419	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R422	1-218-690-11	s	METAL, CHIP 820 0.50% 1/16W
R423	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R424	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R425	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R426	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R427	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R428	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R429	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R430	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R431	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R432	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R433	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R434	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R435	1-218-672-11	s	METAL, CHIP 150 0.50% 1/16W
R436	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R437	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R438	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R439	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R440	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R441	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R442	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R443	1-218-699-11	s	METAL, CHIP 2K 0.50% 1/16W
R444	1-218-687-11	s	METAL, CHIP 620 0.50% 1/16W
R445	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R446	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R447	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R448	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R449	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R450	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R451	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R452	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R453	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R454	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R455	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R456	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R457	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R458	1-218-717-11	s	METAL, CHIP 11K 0.50% 1/16W
R459	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W
R460	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R461	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R462	1-218-727-11	s	METAL, CHIP 30K 0.50% 1/16W
R463	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R464	1-218-703-11	s	METAL, CHIP 3K 0.50% 1/16W
R465	1-218-723-11	s	METAL, CHIP 20K 0.50% 1/16W

(VA-163A Board)

Ref. No. or Q'ty	Part No.	SP	Description
R466	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R467	1-218-698-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R468	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R469	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R470	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R471	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R472	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R480	1-218-728-11	s	METAL, CHIP 33K 0.50% 1/16W
R481	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R490	1-216-864-11	s	METAL, CHIP 0 0.50% 1/16W
R491	1-216-864-11	s	METAL, CHIP 0 0.50% 1/16W
R492	1-216-864-11	s	METAL, CHIP 0 0.50% 1/16W
R493	1-216-295-91	s	METAL, CHIP 5% 0 1/10W
RV50	1-241-263-11	s	RES, ADJ, METAL 5K
RV200	1-241-260-11	s	RES, ADJ, METAL 500
RV300	1-241-260-11	s	RES, ADJ, METAL 500
RV400	1-241-260-11	s	RES, ADJ, METAL 500

FRAME

[External Connector]

Ref.No. or Q'ty	Part No.	SP	Description
CN901	1-561-781-91	s	CONNECTOR BNC "TEST OUT"
CN902	1-562-222-41	s	CONNECTOR 6P FEMALE "REMOTE"
CN903	1-565-051-21	o	CONNECTOR, 20P FEMALE "VF"
or	1-955-080-12	o	HARNESS (VF)
CN904	1-695-841-12	s	CONNECTOR 12P FEMALE "LENS"
CN905	1-509-184-51	s	CONNECTOR 3P MALE "MIC"

[Flexible Card Wire/Harness]

Ref.No. or Q'ty	Part No.	SP	Description
1pc	1-775-774-11	o	FLEXIBLE CARD WIRE (20 CORE) (CN-1121 to MB-602)
2pcs	1-775-775-11	o	FLEXIBLE CARD WIRE (24 CORE) (CN-1122 TO MB-602, MB-602 to PR-242)
1pc	1-775-776-11	o	FLEXIBLE CARD WIRE (30 CORE) (CN-1120 to MB-602)
1pc	1-775-777-11	o	FLEXIBLE CARD WIRE (30 CORE) (CN-1121 to MB-602)
1pc	1-775-778-11	o	FLEXIBLE CARD WIRE (30 CORE) (CN-1120 to MB-602)
1pc	1-782-697-11	s	FLEXIBLE CARD WIRE (20 CORE) (MB-602 to CN-1504)
1pc	1-782-698-11	s	FLEXIBLE CARD WIRE (24 CORE) (MB-602 to CN-1504)
1pc	1-955-080-12	o	HARNESS (VF) (including CN903)
1pc	1-955-086-12	o	HARNESS (PA) (PA BOARD of CCD UNIT to MB-602)

[Housing&Contact]

To CN-1122 BOARD

Ref.No. or Q'ty	Part No.	SP	Description
CN402	1-695-892-11	o	HOUSING, 12P
12pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30
CN405	1-764-198-11	o	HOUSING, 11P
11pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30
CN406	1-764-193-11	o	HOUSING, 3P
3pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30
CN407	1-695-212-11	o	HOUSING, 6P
6pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

To MB-602 BOARD

Ref.No. or Q'ty	Part No.	SP	Description
CN15	1-764-193-11	o	HOUSING, 3P
2pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30
CN21	1-764-196-11	o	HOUSING, 8P
6pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30
CN31	1-580-586-11	o	HOUSING, 20P
4pcs	1-573-176-11	o	CONTACT, FEMALE AWG22-26
16pcs	1-580-599-11	o	CONTACT, FEMALE AWG26-30
CN32	1-695-892-11	o	HOUSING, 12P
12pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30
CN42	1-764-195-11	o	HOUSING, 5P
5pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

To PA BOARD of CCD UNIT

Ref.No. or Q'ty	Part No.	SP	Description
CN2	1-695-212-11	o	HOUSING, 6P
6pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

(FRAME)

(Housing&Contact)

To SW-730 BOARD

Ref.No. or Q'ty	Part No.	SP	Description
CN801	1-764-198-11	o	HOUSING, 11P
11pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

To SW-731 BOARD

Ref.No. or Q'ty	Part No.	SP	Description
CN501	1-695-212-11	o	HOUSING, 6P
6pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

To SW-732 BOARD

Ref.No. or Q'ty	Part No.	SP	Description
CN301	1-764-195-11	o	HOUSING, 5P
5pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

To SW-733 BOARD

Ref.No. or Q'ty	Part No.	SP	Description
CN701	1-764-194-11	o	HOUSING, 4P
4pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

To SW-742 BOARD

Ref.No. or Q'ty	Part No.	SP	Description
CN601	1-764-193-11	o	HOUSING, 3P
2pcs	1-695-215-11	o	CONTACT, FEMALE AWG26-30

6-4. Optional Fixtures

Part No.	SP	Description
J-6026-110-A	o	MULTI-BURST CHART
J-6026-130-B	o	GRAYSCALE CHART (TRANSPARENT 4:3)
J-6029-140-B	o	PATTERN BOX PTB-500
J-6394-080-A	o	GRAYSCALE CHART (TRANSPARENT 16:9)
J-6395-040-A	o	EXTENSION BOARD, EX-464

Section 7
Semiconductor Pin Assignments

ここに記載されている半導体は，それぞれの機能を等価的に表したものです。　なお，互換性のない型名を併記していることがありますので，部品を交換するときは，Spare Partsの章を参照してください。
等価回路はICメーカーのデータブックに従いました。

Semiconductors of which functions are equivalent are described here. For parts replacement, refer to the section of Spare Parts in this manual. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

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RD7.5M-B2	7-3
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2SC3661	7-3
2SC3661-TB	7-3
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DIODE

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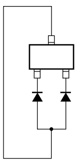

1S2835-T1
1S2836

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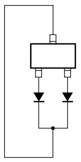

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1SS301-TE85L
HSM88WK-TL
MA141WK

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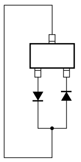

1SS123-T1
1SS226
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HSM107S
HSM107S-TL
HSM88AS-TL
HSM88ASTL

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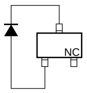

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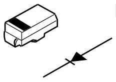

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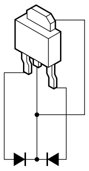

DE5LC20U-TA2

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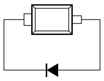

MA113-(TX)

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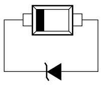
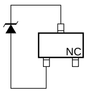


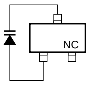
RD2.4UH-T1
RD3.3UH(1)-T1
RD3.3UH-T1
RD3.6UH-T1
RD4.3UH-T1

—TOP VIEW—



RD22M-B
RD22M-T1B3
RD24M-B3
RD24M-T1B3
RD6.2M-B
RD6.2M-T1B
RD7.5M-B2
RD7.5M-T1B
RD8.2M-B3
RD8.2M-T1B3
RD9.1M-B1
RD9.1M-T1B

—TOP VIEW—



SB05-05CP
SB05-05CP-TB

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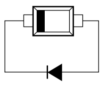

SC802-04-TE12RA

TRANSISTOR

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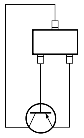

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2SA1226-E4
2SA1226-T1E4
2SA1610-T1Y34
2SA1610-Y33
2SA1611-M5M6
2SA1611-M6
2SA1611-T1M7
2SA1611T1-M5M6
2SA1808-PT106
2SA811A-C17
2SA811A-T1C17
2SA812-T1M7
2SB624-BV345
2SB624-T1BV3

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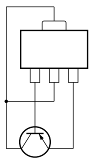

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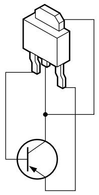
2SB1115-T1YL
2SB1115A-YQ
2SB1121-ST



2SB1261-Z
2SB1261-Z-E2

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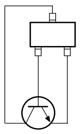

2SC1621-B3
2SC1621-T1B2B3
2SC1622A-T1D17
2SC1623
2SC1623-T1-L5L6
2SC2223-F14
2SC2223-T1F14
2SC2712-YG
2SC2712L-TE85L
2SC2713-L
2SC3082KT146Q
2SC3661
2SC3661-TB
2SC4177-L6
2SC4177-T1L7
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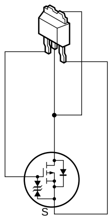
2SD596-T1DV3
2SD596DV345



2SJ325
2SJ325-Z

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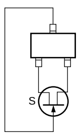

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2SK852-T1X2
2SK852-X2
2SK853-K5
2SK853-T1K5

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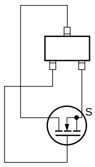
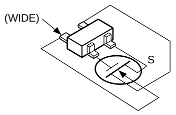


2SK620
2SK620-TX



3SK163-1
3SK163-1-T7

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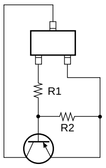
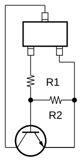


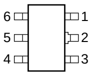
DTA144EUA-T106
(R1, R2=47 K)
FN1A4M-M33
(R1, R2=10 K)
FN1A4M-T1M33

—TOP VIEW—



DTC144EUA-T106
(R1, R2=47 K)
FA1A4M-L33
(R1, R2=10 K)
FA1A4M-T1L33
FA1L3Z-L38
(R1=4.7 K)
FA1L3Z-T1L38

—TOP VIEW—



XN6501
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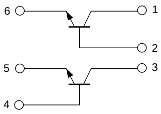
XN6534
XN6534-TW



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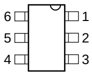
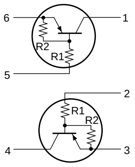
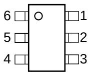


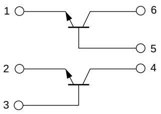
IMB2 (R1, R2=47 K)
IMB2-T110


6
1
R2
R1
5
2
R1
R2
4
3

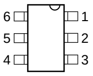
—TOP VIEW—



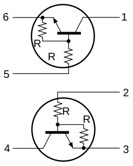
XP6534-TX



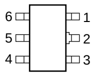
—TOP VIEW—



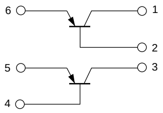
IMH2
IMH2-T110


6
1
R
R
5
2
R
R
4
3

—TOP VIEW—



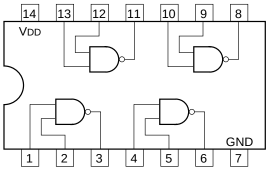
XN6401
XN6401-TW
XN6435
XN6435-TW

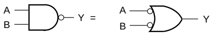


IC

74LCX00MTCX (NS)
74VHC00MTCX (NS)FLAT PACKAGE
TC74HC00AF(EL) (TOSHIBA)FLAT PACKAGE
TC74VHC00FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS QUAD 2-INPUT NAND GATES
—TOP VIEW—


14
13
12
11
10
9
8
VDD
GND
1
2
3
4
5
6
7



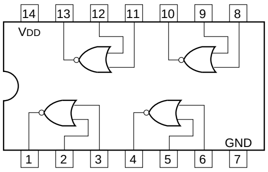
$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

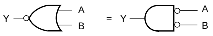
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

74LCX02MTCX (NS)FLAT PACKAGE
74VHC02MTCX (NS)FLAT PACKAGE

C-MOS QUAD 2-INPUT NOR GATES
—TOP VIEW—


14
13
12
11
10
9
8
VDD
GND
1
2
3
4
5
6
7



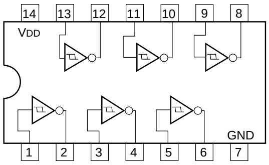
$Y = \overline{A + B} = \overline{A} \cdot \overline{B}$

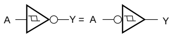
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

74LCX14MTCX (NS)FLAT PACKAGE

C-MOS HEX SCHMITT TRIGGER INVERTERS
—TOP VIEW—


14
13
12
11
10
9
8
VDD
GND
1
2
3
4
5
6
7



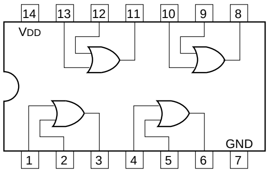
$Y = \overline{A}$

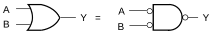
A	Y
0	1
1	0

0 : LOW LEVEL
1 : HIGH LEVEL

74LCX32MTCX (NS)FLAT PACKAGE
74VHC32MTCX (NS)FLAT PACKAGE

C-MOS QUAD 2-INPUT OR GATES
—TOP VIEW—


14
13
12
11
10
9
8
VDD
GND
1
2
3
4
5
6
7



$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

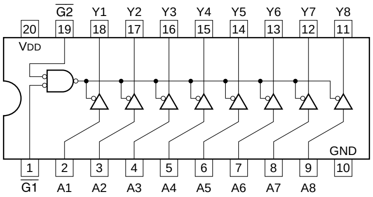
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

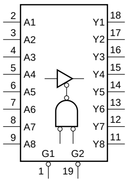
0 : LOW LEVEL
1 : HIGH LEVEL

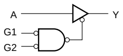
74LCX541MTCX (NS)
TC74VHC541FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS

—TOP VIEW—


$\overline{G2}$ Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
20 19 18 17 16 15 14 13 12 11
VDD
GND
1 2 3 4 5 6 7 8 9 10
$\overline{G1}$ A1 A2 A3 A4 A5 A6 A7 A8


2 A1 Y1 18
3 A2 Y2 17
4 A3 Y3 16
5 A4 Y4 15
6 A5 Y5 14
7 A6 Y6 13
8 A7 Y7 12
9 A8 Y8 11
G1 G2
1 19



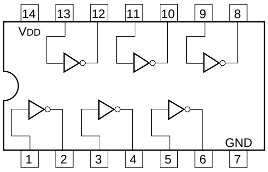
G1	G2	A	Y
0	0	0	0
0	0	1	1
1	×	×	HI-Z
×	1	×	HI-Z

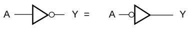
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

74VHC04MTCX (NS)FLAT PACKAGE
SN74HCT04APW-E05 (TI)FLAT PACKAGE
TC74AC04F-EL (TOSHIBA)FLAT PACKAGE

C-MOS HEX INVERTERS

—TOP VIEW—


14 13 12 11 10 9 8
VDD
GND
1 2 3 4 5 6 7



$Y = \overline{A}$

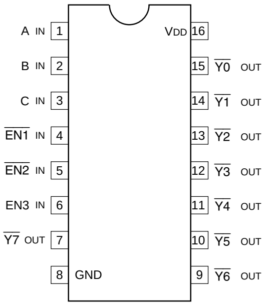
A	Y
0	1
1	0

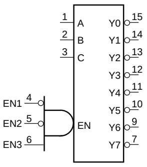
0 : LOW LEVEL
1 : HIGH LEVEL

74VHC138MTCX (NS)FLAT PACKAGE
TC74VHC138FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER

—TOP VIEW—


A IN 1
B IN 2
C IN 3
$\overline{EN1}$ IN 4
$\overline{EN2}$ IN 5
EN3 IN 6
$\overline{Y7}$ OUT 7
8 GND
VDD 16
15 $\overline{Y0}$ OUT
14 $\overline{Y1}$ OUT
13 $\overline{Y2}$ OUT
12 $\overline{Y3}$ OUT
11 $\overline{Y4}$ OUT
10 $\overline{Y5}$ OUT
9 $\overline{Y6}$ OUT


1 A
2 B
3 C
Y0 15
Y1 14
Y2 13
Y3 12
Y4 11
Y5 10
Y6 9
Y7 7
EN1 4
EN2 5
EN3 6
EN

INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	×	×	×	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

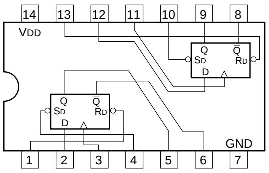
$EN = \overline{EN1} \cdot \overline{EN2} \cdot EN3$

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

74VHC74MTCX (NS)FLAT PACKAGE
SN74HC74ANS (TI)FLAT PACKAGE
SN74HC74ANS-E05
TC74VHC74FT(EL) (TOSHIBA)FLAT PACKAGE

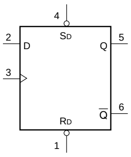
C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET

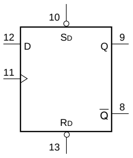
—TOP VIEW—


14 13 12 11 10 9 8
VDD
Q
$\overline{Q}$
SD
RD
D
GND
1 2 3 4 5 6 7

INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	CK	D	Qn+1	$\overline{Qn+1}$
0	1	×	×	1	0
1	0	×	×	0	1
0	0	×	×	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	×	Qn	$\overline{Qn}$

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

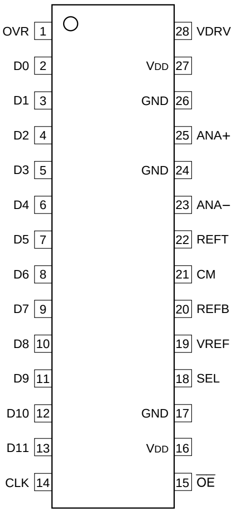

4
2 D
SD
Q 5
3
RD
$\overline{Q}$ 6
1

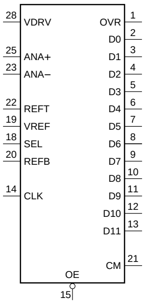

10
12 D
SD
Q 9
11
RD
$\overline{Q}$ 8
13

ADS805E-T2 (BURR-BROWN)FLAT PACKAGE

C-MOS 12-BIT A/D CONVERTER

—TOP VIEW—


OVR 1
D0 2
D1 3
D2 4
D3 5
D4 6
D5 7
D6 8
D7 9
D8 10
D9 11
D10 12
D11 13
CLK 14
28 VDRV
VDD 27
GND 26
25 ANA+
GND 24
23 ANA−
22 REFT
21 CM
20 REFB
19 VREF
18 SEL
GND 17
VDD 16
15 $\overline{OE}$

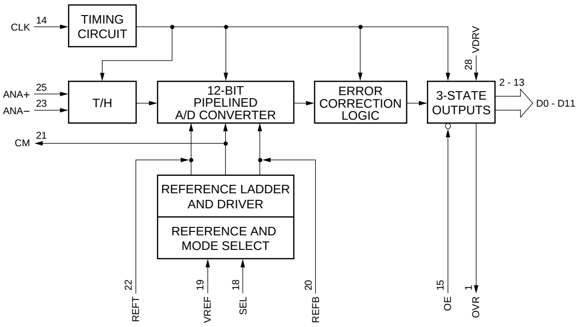

28 VDRV
25 ANA+
23 ANA−
22 REFT
19 VREF
18 SEL
20 REFB
14 CLK
OVR 1
D0 2
D1 3
D2 4
D3 5
D4 6
D5 7
D6 8
D7 9
D8 10
D9 11
D10 12
D11 13
CM 21
OE
15

INPUT

ANA+ : ANALOG (+)
ANA− : COMPLEMENTARY ANALOG
CLK : CONVERT CLOCK
$\overline{OE}$: OUTPUT ENABLE
REFB : BOTTOM REFERENCE VOLTAGE
REFT : TOP REFERENCE VOLTAGE
SEL : INPUT RANGE SELECT
VDRV : OUTPUT DRIVER VOLTAGE
VREF : REFERENCE VOLTAGE SELECT

OUTPUT

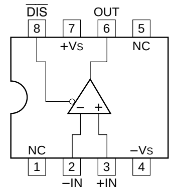
CM : COMMON MODE VOLTAGE
D0 - D11 : DATA BIT
OVR : OVER RANGE INDICATOR


CLK 14
TIMING CIRCUIT
VDRV 28
ANA+ 25
ANA− 23
T/H
12-BIT PIPELINED A/D CONVERTER
ERROR CORRECTION LOGIC
3-STATE OUTPUTS
2 - 13
D0 - D11
CM 21
REFERENCE LADDER AND DRIVER
REFERENCE AND MODE SELECT
22 REFT
19 VREF
18 SEL
20 REFB
15 OE
1 OVR

AD8041AR (AD)FLAT PACKAGE
AD8041AR-REEL

160 MHz RAIL-TO-RAIL OPERATIONAL AMPLIFIER WITH DISABLE

—TOP VIEW—

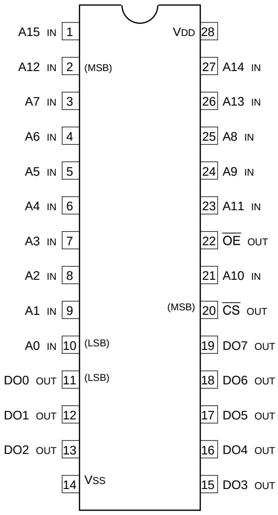

$\overline{DIS}$
OUT
8
7
6
5
+Vs
NC
−
+
NC
−Vs
1
2
3
4
−IN
+IN

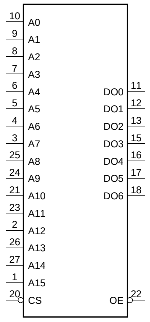
$\overline{DIS}$: DISABLE/POWER DOWN INPUT

AT27C512R-15RC (ATMEL)

C-MOS 512 K (65,536 × 8) UV-EPROM

—TOP VIEW—


A15 IN 1
A12 IN 2 (MSB)
A7 IN 3
A6 IN 4
A5 IN 5
A4 IN 6
A3 IN 7
A2 IN 8
A1 IN 9
A0 IN 10 (LSB)
DO0 OUT 11 (LSB)
DO1 OUT 12
DO2 OUT 13
14 VSS
VDD 28
27 A14 IN
26 A13 IN
25 A8 IN
24 A9 IN
23 A11 IN
22 $\overline{OE}$ OUT
21 A10 IN
(MSB) 20 $\overline{CS}$ OUT
19 DO7 OUT
18 DO6 OUT
17 DO5 OUT
16 DO4 OUT
15 DO3 OUT


10 A0
9 A1
8 A2
7 A3
6 A4
5 A5
4 A6
3 A7
25 A8
24 A9
21 A10
23 A11
2 A12
26 A13
27 A14
1 A15
20 CS
DO0 11
DO1 12
DO2 13
DO3 15
DO4 16
DO5 17
DO6 18
OE 22

INPUT		DO	OPERATION
$\overline{CS}$	$\overline{OE}$		
1	×	HIGH-Z	STAND BY
0	1	HIGH-Z	OPERATING
0	0	DO	OPERATING

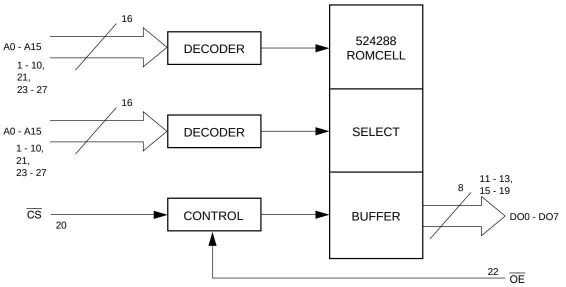
0 : LOW LEVEL
1 : HIGH LEVEL
× : LOW OR HIGH LEVEL

INPUT

A0 - A15 : ADDRESS INPUTS
$\overline{CS}$: CHIP SELECT

OUTPUT

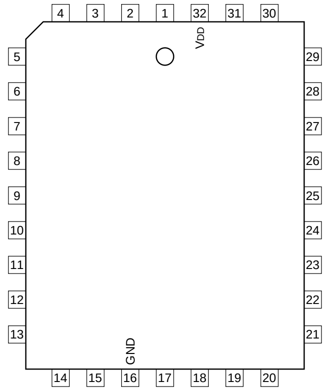
DO0 - DO7 : DATA OUTPUTS
$\overline{OE}$: OUTPUT ENABLE

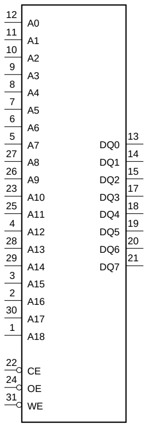

16
A0 - A15
1 - 10,
21,
23 - 27
DECODER
524288
ROMCELL
16
A0 - A15
1 - 10,
21,
23 - 27
DECODER
SELECT
$\overline{CS}$
20
CONTROL
BUFFER
8
11 - 13,
15 - 19
DO0 - DO7
22
$\overline{OE}$

AM29F040B-90JC (AMD)

C-MOS 4 M (524,288 × 8)-BIT FLASH MEMORY

—TOP VIEW—


4
3
2
1
32
31
30
VDD
5
6
7
8
9
10
11
12
13
29
28
27
26
25
24
23
22
21
GND
14
15
16
17
18
19
20


12 A0
11 A1
10 A2
9 A3
8 A4
7 A5
6 A6
5 A7
27 A8
26 A9
23 A10
25 A11
4 A12
28 A13
29 A14
3 A15
2 A16
30 A17
1 A18
22 CE
24 OE
31 WE
DQ0 13
DQ1 14
DQ2 15
DQ3 17
DQ4 18
DQ5 19
DQ6 20
DQ7 21

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	A18	17	I/O	DQ3
2	I	A16	18	I/O	DQ4
3	I	A15	19	I/O	DQ5
4	I	A12	20	I/O	DQ6
5	I	A7	21	I/O	DQ7
6	I	A6	22	I	$\overline{CE}$
7	I	A5	23	I	A10
8	I	A4	24	I	$\overline{OE}$
9	I	A3	25	I	A11
10	I	A2	26	I	A9
11	I	A1	27	I	A8
12	I	A0	28	I	A13
13	I/O	DQ0	29	I	A14
14	I/O	DQ1	30	I	A17
15	I/O	DQ2	31	I	$\overline{WE}$
16	—	GND	32	—	VDD

INPUT

A0 - A18 : ADDRESS INPUTS
$\overline{CE}$: CHIP ENABLE
$\overline{OE}$: OUTPUT ENABLE
$\overline{WE}$: WRITE ENABLE

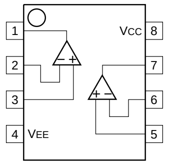
INPUT/OUTPUT

DQ0 - DQ7 : DATA INPUT/OUTPUT

BA10358F-E2 (ROHM)FLAT PACKAGE
NJU7022M (JRC)FLAT PACKAGE
NJU7022M-TE2
UPC358G2-E2
UPC4572G2-E2 (NEC)FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIERS
(SINGLE-SUPPLY TYPE)

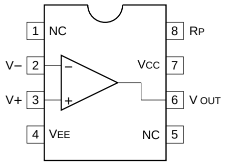
—TOP VIEW—


1
2
3
4 VEE
VCC 8
7
6
5
−
+
+
−

CLC505AJE (COMLINEAR)FLAT PACKAGE
CLC505AJE-T

OPERATIONAL AMPLIFIER

—TOP VIEW—

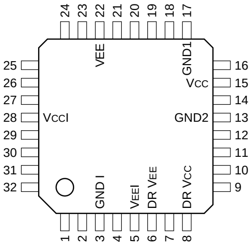

1 NC
V− 2
V+ 3
4 VEE
8 RP
VCC 7
6 V OUT
NC 5
−
+

http://getMANUAL.com

CXA1486Q-TH (SONY)

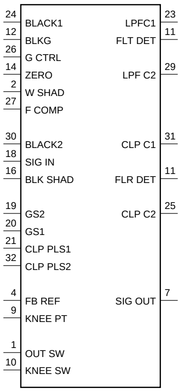
VIDEO AMPLIFIER FOR VIDEO CAMERA

—TOP VIEW—



24 23 22 21 20 19 18 17
VEE
GND1
VCC
VCCI
GND2
25 26 27 28 29 30 31 32
16 15 14 13 12 11 10 9
GND I
VEEI
DR VEE
DR VCC
1 2 3 4 5 6 7 8

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	OUT SW	17	—	GND1
2	I	W SHAD	18	I	SIG IN
3	—	GND I	19	I	GS2
4	I	FB REF	20	I	GS1
5	—	VEEI	21	I	CLP PLS1
6	—	DR VEE	22	—	VEE
7	O	SIG OUT	23	O	LPF C1
8	—	DR VCC	24	I	BLACK1
9	I	KNEE PT	25	O	CLP C2
10	I	KNEE SW	26	I	G CTRL
11	O	FLR DET	27	I	F COMP
12	I	BLKG	28	—	VCCI
13	—	GND2	29	O	LPF C2
14	I	ZERO	30	I	BLACK2
15	—	VCC	31	O	CLP C1
16	I	BLK SHAD	32	I	CLP PLS2



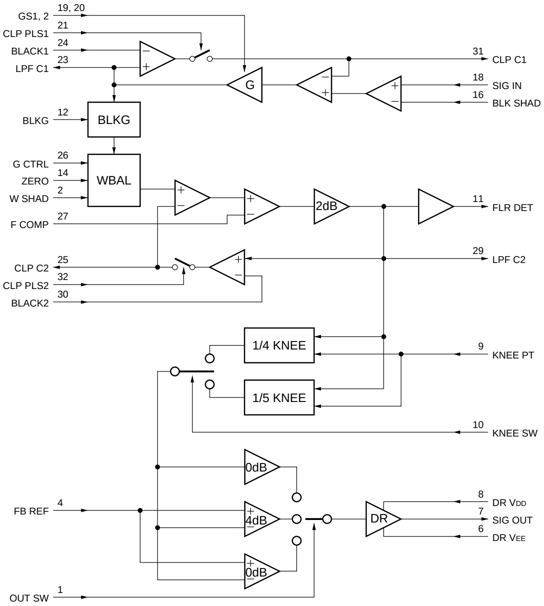
24 BLACK1
12 BLKG
26 G CTRL
14 ZERO
2 W SHAD
27 F COMP
30 BLACK2
18 SIG IN
16 BLK SHAD
19 GS2
20 GS1
21 CLP PLS1
32 CLP PLS2
4 FB REF
9 KNEE PT
1 OUT SW
10 KNEE SW
LPFC1 23
FLT DET 11
LPF C2 29
CLP C1 31
FLR DET 11
CLP C2 25
SIG OUT 7

INPUT

BLACK1, 2 : FOR CLAMP DC COMPENSATION
BLKG : BLANKING SIGNAL
BLK SHAD : BLACK SHADING CORRECTION SIGNAL
CLP PLS1, 2 : CLAMP PULSE
F COMP : FLARE COMPENSATION SIGNAL
FB REF : OUTPUT 2 INVERT AMPLIFY DC ADJUST
G CTRL : WHITE BALANCE GAIN CONTROL
GS1, 2 : GAIN SELECT
KNEE PT : KNEE POINT
KNEE SW : 1/4, 1/5 KNEE SELECT
(4.5 V = 1/4 KNEE, 0 V = 1/5 KNEE)
OUT SW : OUTPUT 3 AMPLIFY SELECT
SIG IN : SIGNAL INPUT
W SHAD : WHITE SHADING SIGNAL
ZERO : VARIABLE GAIN AMPLIFY ZERO POINT ADJUST

OUTPUT

CLP C1, C2 : FOR CLAMP CAPACITANCE
FLR DET : FLARE DETECT
LPF C1, C2 : CONNECT CAPACITANCE FOR LPF
SIG OUT : SIGNAL OUTPUT

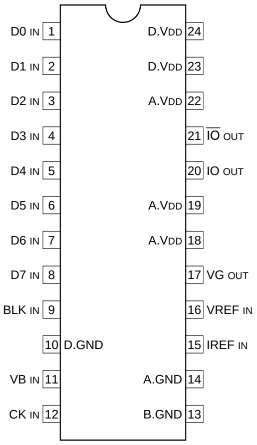


GS1, 2 19, 20
CLP PLS1 21
BLACK1 24
LPF C1 23
G
31 CLP C1
18 SIG IN
16 BLK SHAD
BLKG 12
BLKG
G CTRL 26
ZERO 14
W SHAD 2
F COMP 27
WBAL
2dB
11 FLR DET
CLP C2 25
CLP PLS2 32
BLACK2 30
29 LPF C2
1/4 KNEE
9 KNEE PT
1/5 KNEE
10 KNEE SW
0dB
FB REF 4
4dB
0dB
DR
8 DR VDD
7 SIG OUT
6 DR VEE
OUT SW 1

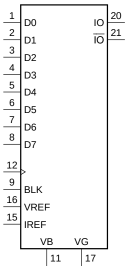
CXD1171M (SONY)FLAT PACKAGE
CXD1171M-TH

C-MOS 8-BIT D/A CONVERTER

—TOP VIEW—

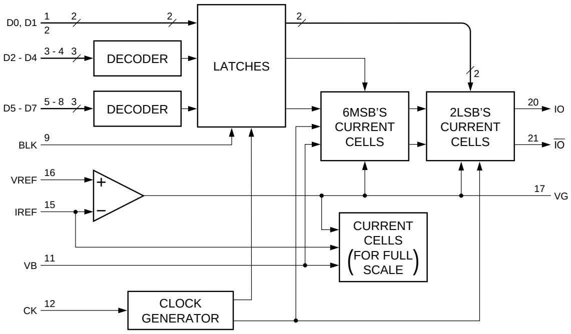


D0 IN 1
D1 IN 2
D2 IN 3
D3 IN 4
D4 IN 5
D5 IN 6
D6 IN 7
D7 IN 8
BLK IN 9
10 D.GND
VB IN 11
CK IN 12
24 D.VDD
23 D.VDD
22 A.VDD
21 IO OUT
20 IO OUT
19 A.VDD
18 A.VDD
17 VG OUT
16 VREF IN
15 IREF IN
14 A.GND
13 B.GND



1 D0
2 D1
3 D2
4 D3
5 D4
6 D5
7 D6
8 D7
12
9 BLK
16 VREF
15 IREF
VB VG
11 17
IO 20
IO 21

CK	:	CLOCK INPUT
BLK	:	BLANKING PULSE INPUT
D0 - 7	:	DIGITAL DATA INPUT
IO	:	CURRENT OUTPUT
$\overline{\text{IO}}$	:	INVERT CURRENT OUTPUT
IREF	:	CURRENT REFERENCE INPUT
VB, VG	:	FOR CAPACITOR
VREF	:	VOLTAGE REFERENCE INPUT

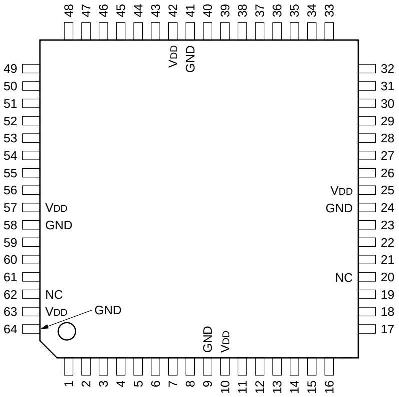


D0, D1 1 2 2 2
D2 - D4 3 - 4 3
DECODER
D5 - D7 5 - 8 3
DECODER
LATCHES
2
2
6MSB'S CURRENT CELLS
2LSB'S CURRENT CELLS
20 IO
21 IO
BLK 9
VREF 16
IREF 15
17 VG
CURRENT CELLS (FOR FULL SCALE)
VB 11
CK 12
CLOCK GENERATOR

CXD8889R (SONY)

C-MOS SERIAL I/O

—TOP VIEW—



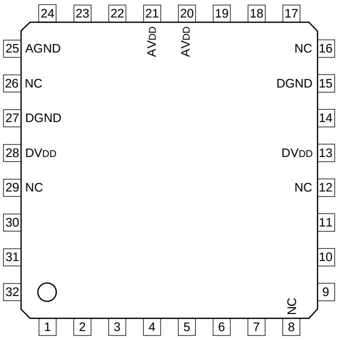
48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33
VDD
GND
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
VDD
GND
NC
VDD
GND
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
VDD
GND
NC
GND
VDD
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

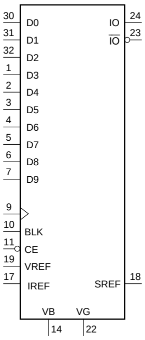
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	D0	17	—	NC	33	—	NC	49	—	NC
2	I/O	D1	18	—	NC	34	—	NC	50	—	NC
3	I/O	D2	19	—	NC	35	—	NC	51	—	NC
4	I/O	D3	20	—	NC	36	—	NC	52	—	NC
5	I/O	D4	21	O	BCKO	37	I	SEL	53	—	NC
6	I/O	D5	22	O	IVH	38	I	RVD	54	—	NC
7	I/O	D6	23	O	TVD	39	I	RESE	55	—	NC
8	I/O	D7	24	—	GND	40	I	WRN	56	—	NC
9	—	GND	25	—	VDD	41	—	GND	57	—	VDD
10	—	VDD	26	—	NC	42	—	VDD	58	—	GND
11	—	NC	27	—	NC	43	I	RDN	59	I	BRDI
12	—	NC	28	—	NC	44	I	CSN	60	O	BRD0
13	—	NC	29	—	NC	45	I	CLK	61	O	BCKO
14	—	NC	30	—	NC	46	I	A2	62	—	NC
15	—	NC	31	—	NC	47	I	A1	63	—	VDD
16	—	NC	32	—	NC	48	I	A0	64	—	GND

CXD2306Q (SONY)

C-MOS 10-BIT 1CH D/A CONVERTER

—TOP VIEW—


24
23
22
21
20
19
18
17
AVDD
AVDD
25 AGND
26 NC
27 DGND
28 DVDD
29 NC
30
31
32
NC 16
DGND 15
14
DVDD 13
NC 12
11
10
9
NC
1
2
3
4
5
6
7
8

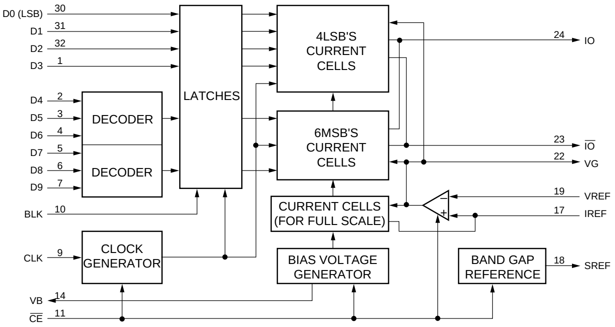

30 D0
31 D1
32 D2
1 D3
2 D4
3 D5
4 D6
5 D7
6 D8
7 D9
9
10 BLK
11 CE
19 VREF
17 IREF
IO 24
IO 23
SREF 18
VB 14
VG 22

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	D3	17	I	IREF
2	I	D4	18	O	SREF
3	I	D5	19	I	VREF
4	I	D6	20	—	AVDD
5	I	D7	21	—	AVDD
6	I	D8	22	O	VG
7	I	D9 (MSB)	23	O	$\overline{\text{IO}}$
8	—	NC	24	O	IO
9	I	CK	25	—	AGND
10	I	BLK	26	—	NC
11	I	$\overline{\text{CE}}$	27	—	DGND
12	—	NC	28	—	DVDD
13	—	DVDD	29	—	NC
14	O	VB	30	I	D0 (LSB)
15	—	DGND	31	I	D1
16	—	NC	32	I	D2

BLK	:	BLANKING PULSE INPUT
CE	:	CHIP ENABLE
CK	:	CLOCK INPUT
D0 - 7	:	DIGITAL DATA INPUTS
IO	:	CURRENT OUTPUT
$\overline{\text{IO}}$	:	INVERT CURRENT OUTPUT
IREF	:	CURRENT REFERENCE INPUT
SREF	:	INDEPENDENT CONSTANT VOLTAGE OUTPUT
VB, VG	:	FOR CAPACITOR
VREF	:	VOLTAGE REFERENCE INPUT

MAXIMUM CONVERSION RATE

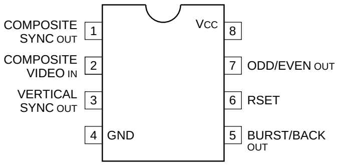
CXD2306Q	75MSPS
CXD2315Q	80MSPS

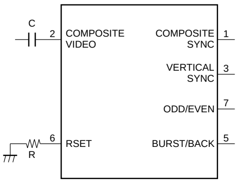

D0 (LSB) 30
D1 31
D2 32
D3 1
D4 2
D5 3
D6 4
D7 5
D8 6
D9 7
BLK 10
CLK 9
VB 14
CE 11
DECODER
DECODER
LATCHES
CLOCK GENERATOR
4LSB'S CURRENT CELLS
6MSB'S CURRENT CELLS
CURRENT CELLS (FOR FULL SCALE)
BIAS VOLTAGE GENERATOR
BAND GAP REFERENCE
24 IO
23 IO
22 VG
19 VREF
17 IREF
18 SREF

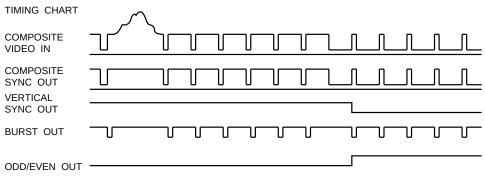
EL4581CS-TE2 (ELT)FLAT PACKAGE

VIDEO SYNC SEPARATOR

—TOP VIEW—


COMPOSITE SYNC OUT 1
COMPOSITE VIDEO IN 2
VERTICAL SYNC OUT 3
4 GND
VCC 8
7 ODD/EVEN OUT
6 RSET
5 BURST/BACK OUT

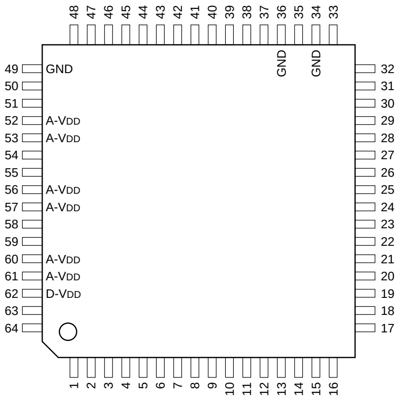

C
2 COMPOSITE VIDEO
6 RSET
R
COMPOSITE SYNC 1
VERTICAL SYNC 3
ODD/EVEN 7
BURST/BACK 5



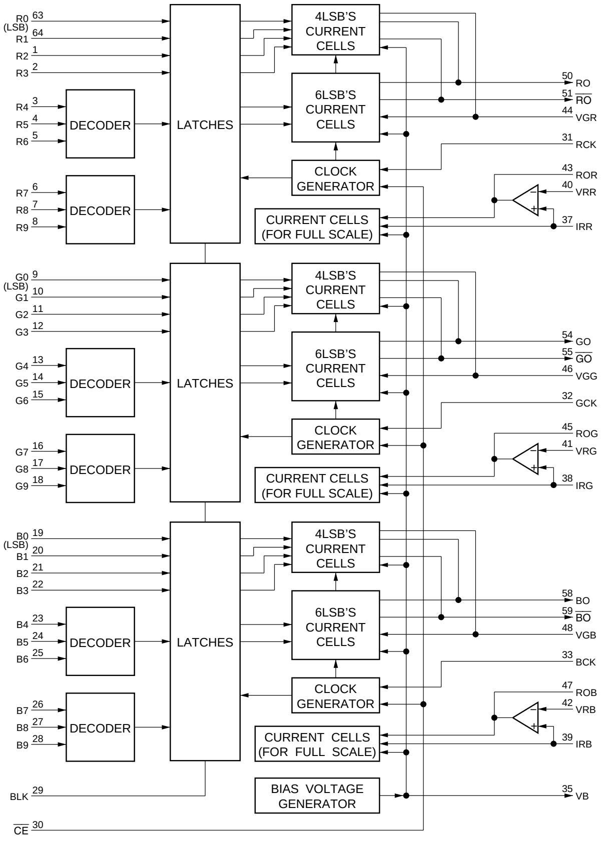
CXD2307R-T4 (SONY)FLAT PACKAGE
CXD2307R-T6

C-MOS 10-BIT 50 MSPS RGB 3CHANNEL D/A CONVERTER

—TOP VIEW—


48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
GND
GND
49 GND
50
51
52 A-VDD
53 A-VDD
54
55
56 A-VDD
57 A-VDD
58
59
60 A-VDD
61 A-VDD
62 D-VDD
63
64
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

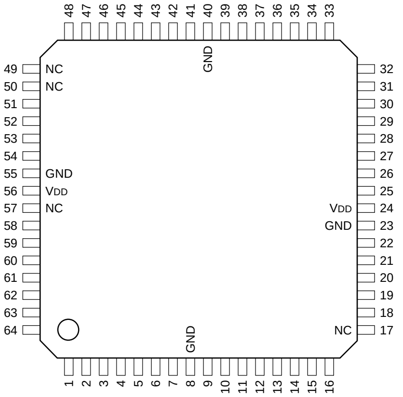
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	R2	17	I	G8	33	I	BCK	49	—	GND
2	I	R3	18	I	G9	34	—	GND	50	O	RO
3	I	R4	19	I	B0 (LSB)	35	O	VB	51	O	$\overline{\text{RO}}$
4	I	R5	20	I	B1	36	—	GND	52	—	A-VDD
5	I	R6	21	I	B2	37	I	IRR	53	—	A-VDD
6	I	R7	22	I	B3	38	I	IRG	54	O	GO
7	I	R8	23	I	B4	39	I	IRB	55	O	$\overline{\text{GO}}$
8	I	R9	24	I	B5	40	I	VRR	56	—	A-VDD
9	I	G0 (LSB)	25	I	B6	41	I	VRG	57	—	A-VDD
10	I	G1	26	I	B7	42	I	VRB	58	O	BO
11	I	G2	27	I	B8	43	I	ROR	59	O	$\overline{\text{BO}}$
12	I	G3	28	I	B9	44	I	VGR	60	—	A-VDD
13	I	G4	29	I	BLK	45	I	ROG	61	—	A-VDD
14	I	G5	30	I	$\overline{\text{CE}}$	46	I	VGG	62	—	D-VDD
15	I	G6	31	I	RCK	47	I	ROB	63	I	R0 (LSB)
16	I	G7	32	I	GCK	48	I	VGB	64	I	R1

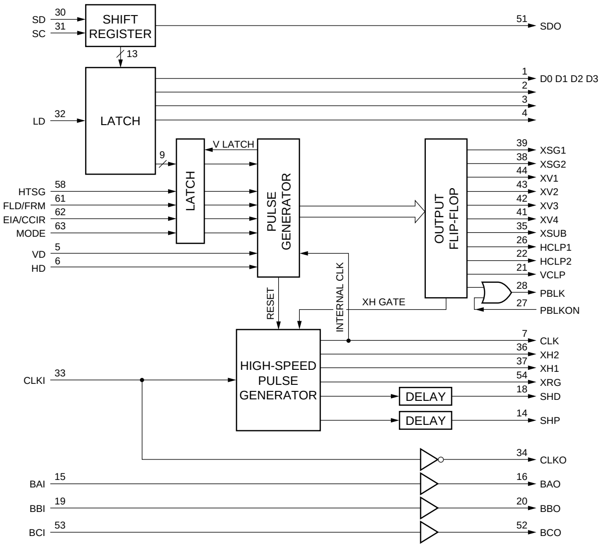

R0 (LSB) 63
R1 64
R2 1
R3 2
R4 3
R5 4
R6 5
R7 6
R8 7
R9 8
G0 (LSB) 9
G1 10
G2 11
G3 12
G4 13
G5 14
G6 15
G7 16
G8 17
G9 18
B0 (LSB) 19
B1 20
B2 21
B3 22
B4 23
B5 24
B6 25
B7 26
B8 27
B9 28
BLK 29
CE 30
DECODER
LATCHES
4LSB'S CURRENT CELLS
6LSB'S CURRENT CELLS
CLOCK GENERATOR
CURRENT CELLS (FOR FULL SCALE)
BIAS VOLTAGE GENERATOR
50 RO
51 RO
44 VGR
31 RCK
43 ROR
40 VRR
37 IRR
54 GO
55 GO
46 VGG
32 GCK
45 ROG
41 VRG
38 IRG
58 BO
59 BO
48 VGB
33 BCK
47 ROB
42 VRB
39 IRB
35 VB

CXD2422R (SONY)

C-MOS TIMING GENERATOR FOR CCD CAMERA

—TOP VIEW—


48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33
49 NC
50 NC
51
52
53
54
55 GND
56 VDD
57 NC
58
59
60
61
62
63
64
GND
GND
32
31
30
29
28
27
26
25
VDD 24
GND 23
22
21
20
19
18
NC 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16


SD 30
SC 31
SHIFT REGISTER
51 SDO
13
LD 32
LATCH
1 2 3 4 D0 D1 D2 D3
9
LATCH
V LATCH
PULSE GENERATOR
OUTPUT FLIP-FLOP
HTSG 58
FLD/FRM 61
EIA/CCIR 62
MODE 63
VD 5
HD 6
39 XSG1
38 XSG2
44 XV1
43 XV2
42 XV3
41 XV4
35 XSUB
26 HCLP1
22 HCLP2
21 VCLP
28 PBLK
27 PBLKON
RESET
INTERNAL CLK
XH GATE
CLKI 33
HIGH-SPEED PULSE GENERATOR
7 CLK
36 XH2
37 XH1
54 XRG
18 SHD
14 SHP
DELAY
DELAY
34 CLKO
BAI 15
16 BAO
BBI 19
20 BBO
BCI 53
52 BCO

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	D0	17	—	NC	33	I	CLKI	49	—	NC
2	O	D1	18	O	SHD	34	O	CLKO	50	—	NC
3	O	D2	19	I	BBI	35	O	XSUB	51	O	SDO
4	O	D3	20	O	BBO	36	O	XH2	52	O	BCO
5	I	VD	21	O	VCLP	37	O	XH1	53	I	BCI
6	I	HD	22	O	HCLP2	38	O	XSG2	54	O	XRG
7	O	CLK	23	—	GND	39	O	XSG1	55	—	GND
8	—	GND	24	—	VDD	40	—	GND	56	—	VDD
9	I	TEST1	25	I	TEST6	41	O	XV4	57	—	NC
10	I	TEST2	26	O	HCLP1	42	O	XV3	58	I	HTSG
11	I	TEST3	27	I	PBLKON	43	O	XV2	59	I	RST
12	I	TEST4	28	O	PBLK	44	O	XV1	60	I	TEST12
13	I	TEST5	29	I	TEST7	45	O	TEST8	61	I	FLD/FRM
14	O	SHP	30	I	SD	46	O	TEST9	62	I	EIA/CCIR
15	I	BAI	31	I	SC	47	O	TEST10	63	I	MODE
16	O	BAO	32	I	LD	48	O	TEST11	64	I	TEST13

INPUT

BAI : BUFFER INPUT FOR SHP PHASE ADJUSTMENT
BBI : BUFFER INPUT FOR SHD PHASE ADJUSTMENT
BCI : BUFFER INPUT FOR XRG PHASE ADJUSTMENT
CLKI : CLOCK
EIA/CCIR : SYSTEM SELECT (H:EIA/L:CCIR)
FLD/FRM : MODE SELECT (H:FIELD CHARGE/L:FRAME CHARGE)
HD : HORIZONTAL DRIVE
HTSG : ON/OFF CONTROL FOR READ PULSE
LD : LATCH PULSE FOR ELECTRONIC SHUTTER CONTROL
MODE : MODE SELECT (H:COMPONENT DIGITAL/L:COMPOSITE DIGITAL)
PBLKON : ON/OFF CONTROL FOR PBLK
RST : FOR TEST
SC : CLOCK FOR ELECTROM\NIC SHUTTER CONTROL
SD : SERIAL DATA FOR ELECTRONIC SHUTTER CONTROL
TEST1 - TEST7 : FOR TEST
TEST12, TEST13 : FOR TEST
VD : VERTICAL DRIVE

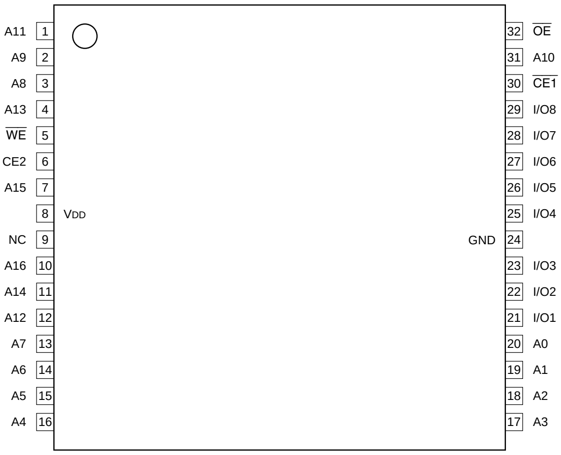
OUTPUT

BAO : NOT-INVERTED OUTPUT OF BAI
BBO : NOT-INVERTED OUTPUT OF BBI
BCO : NOT-INVERTED OUTPUT OF BCI
CLK : DIVIDED-BY-TWO CLOCK (PIN-33)
CLKO : INVERTED OUTPUT OF CLKI
D0 - D3 : EXPANSION I/O
HCLP1 - HCLP2 : HORIZONTAL CLAMP PULSE
PBLK : PRE-BLANKING PULSE
SDO : SERIAL DATA FOR ELECTRONIC SHUTTER CONTROL
SHD : SAMPLING PULSE FOR CCD'S SIGNAL LEVEL
SHP : SAMPLING PULSE FOR CCD'S PRE-CHARGE LEVEL
TEST8 - TEST11 : FOR TEST
VCLP : VERTICAL CLAMP PULSE
XH1, XH2 : HORIZONTAL REGISTER DRIVE CLOCK
XRG : OUTPUT SECTION RESET GATE PULSE
XSG1, XSG2 : SENSOR'S ELECTRON CHARGE READ PULSE
XSUB : SUBSTRATE PULSE FOR ELECTRONIC SHUTTER
XV1 - XV4 : VERTICAL REGISTER DRIVE CLOCK

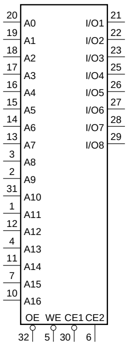
KM681000BLT-7L (SAMSUNG)FLAT PACKAGE
KM681000BLT-7LT

C-MOS 1 M (131,072 × 8)-BIT SRAM

—TOP VIEW—


A11 1
A9 2
A8 3
A13 4
WE 5
CE2 6
A15 7
8 VDD
NC 9
A16 10
A14 11
A12 12
A7 13
A6 14
A5 15
A4 16
32 OE
31 A10
30 CE1
29 I/O8
28 I/O7
27 I/O6
26 I/O5
25 I/O4
GND 24
23 I/O3
22 I/O2
21 I/O1
20 A0
19 A1
18 A2
17 A3

A0 - A16 : ADDRESS INPUTS
I/O1 - I/O8 : DATA INPUTS/OUTPUTS
$\overline{\text{CE1}}$, CE2 : CHIP ENABLE1, 2 INPUTS
$\overline{\text{WE}}$: WRITE ENABLE INPUT
$\overline{\text{OE}}$: OUTPUT ENABLE INPUT


20 A0
19 A1
18 A2
17 A3
16 A4
15 A5
14 A6
13 A7
3 A8
2 A9
31 A10
1 A11
12 A12
4 A13
11 A14
7 A15
10 A16
I/O1 21
I/O2 22
I/O3 23
I/O4 25
I/O5 26
I/O6 27
I/O7 28
I/O8 29
OE WE CE1 CE2
32 5 30 6

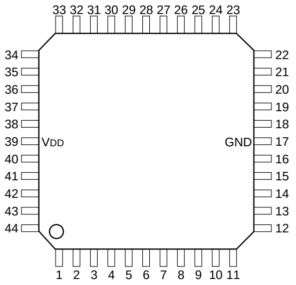
$\overline{\text{CE1}}$	CE2	$\overline{\text{OE}}$	$\overline{\text{WE}}$	MODE	I/O TERMINAL
1	×	×	×	NOT SELECT	HIGH IMPEDANCE
×	0	×	×	NOT SELECT	HIGH IMPEDANCE
0	1	1	1	OUTPUT DISABLE	HIGH IMPEDANCE
0	1	0	1	READ	OUTPUT DATA
0	1	×	0	WRITE	INPUT DATA

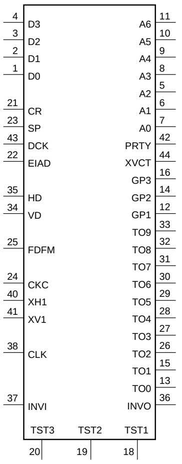
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

CXD8095Q (SONY)FLAT PACKAGE

C-MOS GATE ARRAY

—TOP VIEW—


33 32 31 30 29 28 27 26 25 24 23
34
35
36
37
38
39
40
41
42
43
44
VDD
GND
22
21
20
19
18
17
16
15
14
13
12
1 2 3 4 5 6 7 8 9 10 11


4 D3
3 D2
2 D1
1 D0
21 CR
23 SP
43 DCK
22 EIAD
35 HD
34 VD
25 FDFM
24 CKC
40 XH1
41 XV1
38 CLK
37 INVI
A6 11
A5 10
A4 9
A3 8
A2 5
A1 6
A0 7
PRTY 42
XVCT 44
GP3 16
GP2 14
GP1 12
TO9 33
TO8 32
TO7 31
TO6 30
TO5 29
TO4 28
TO3 27
TO2 26
TO1 15
TO0 13
INVO 36
TST3 20
TST2 19
TST1 18

INPUT

CKC : XH1 ACTIVE EDGE DECISION
CLK : SYSTEM CLOCK
CR : COMPENSATION DATA SELECT
(H : μ-COM MODE, L : NORMAL MODE)
D0-D3 : 4-BIT PARALLEL DATA
DCK : DATA INPUTS STROBE PULSE
EIAD : H : EXT ADDRESS, L : INT ADDRESS
FDFM : FRAME READ/FIELD READ
: SWITCH (H : FIELD READ)
HD : HORIZONTAL DRIVE
INVI : INVERTER
SP : INPUT DATA SERIAL/PARALLEL
SWITCH (H : SERIAL)
TST1 - TST3 : TEST MODE SELECT
VD : VERTICAL DRIVE
XH1 : CLOCK FOR COMPENSATION DATA
XV1 : LINE COUNTER INPUT TERMINAL

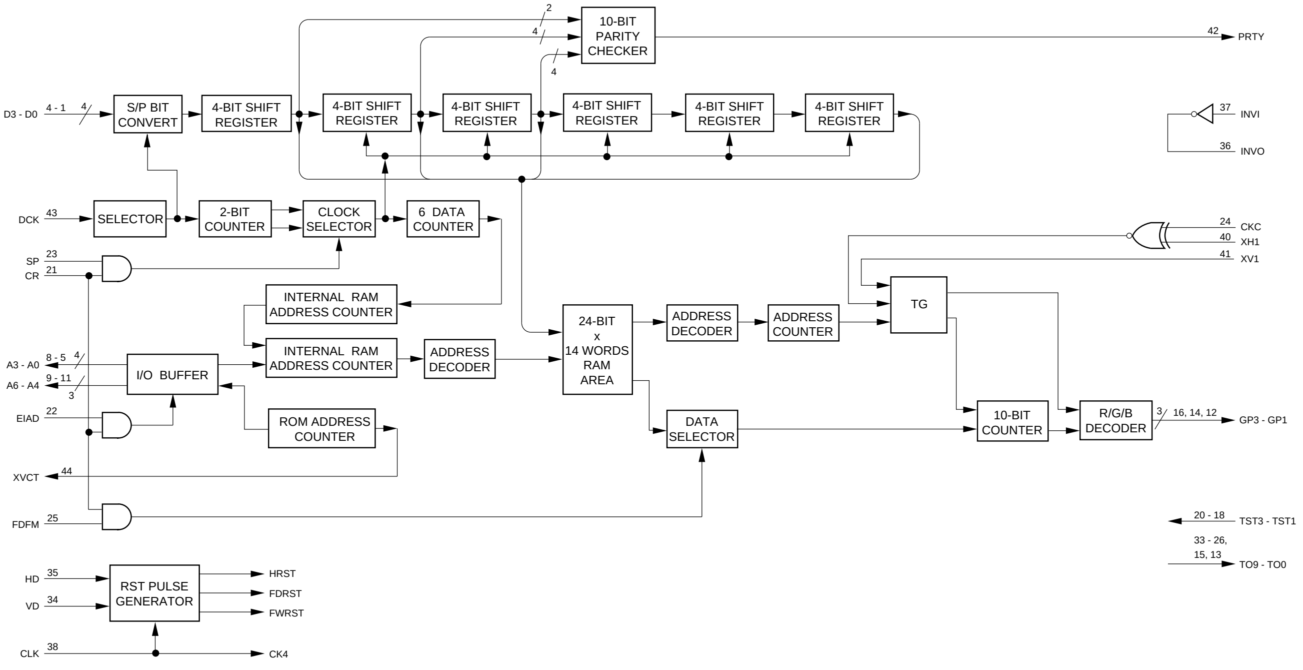
OUTPUT

A4 - A6 : DATA ADDRESS
GP1 - GP3 : GATE PULSE FOR COMPENSATION DATA
(R, G, B-CH)
INVO : INVERTER
PRTY : 12-BIT DATA PARITY CHECK (H : EVEN)
TO0 - TO9 : TEST TERMINAL FOR INTERNAL DATA OUTPUTS
XVCT : ROM POWER VOLTAGE CONTROL TERMINAL

INPUT/OUTPUT

A0 - A3 : DATA ADDRESS OUTPUTS
(DATA ADDRESS INPUTS ; μ-COM MODE)

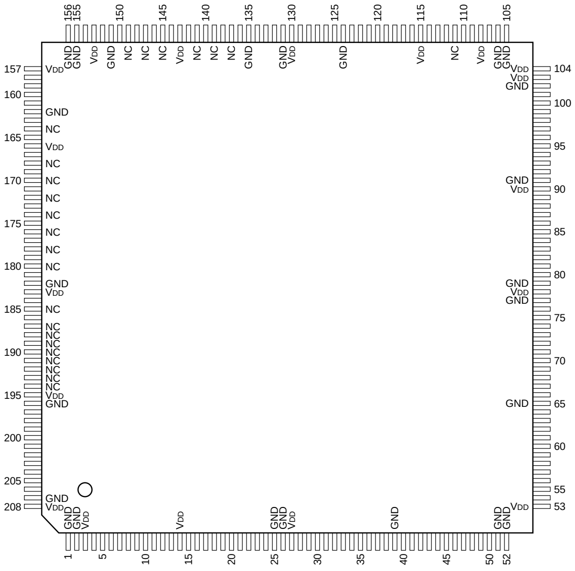
PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL
1	I	D0	12	O	GP1	23	I	SP	34	I	VD
2	I	D1	13	O	TO0	24	I	CKC	35	I	HD
3	I	D2	14	O	GP2	25	I	FDFM	36	O	INVO
4	I	D3	15	O	TO1	26	O	TO2	37	I	INVI
5	I/O	A2	16	O	GP3	27	O	TO3	38	I	CLK
6	I/O	A1	17	—	GND	28	O	TO4	39	—	VDD
7	I/O	A0	18	I	TST1	29	O	TO5	40	I	XH1
8	I/O	A3	19	I	TST2	30	O	TO6	41	I	XV1
9	O	A4	20	I	TST3	31	O	TO7	42	O	PRTY
10	O	A5	21	I	CR	32	O	TO8	43	I	DCK
11	O	A6	22	I	EIAD	33	O	TO9	44	O	XVCT


10-BIT PARITY CHECKER
2
4
4
42 PRTY
D3 - D0
4 - 1
4
S/P BIT CONVERT
4-BIT SHIFT REGISTER
4-BIT SHIFT REGISTER
4-BIT SHIFT REGISTER
4-BIT SHIFT REGISTER
4-BIT SHIFT REGISTER
4-BIT SHIFT REGISTER
37 INVI
36 INVO
DCK 43
SELECTOR
2-BIT COUNTER
CLOCK SELECTOR
6 DATA COUNTER
24 CKC
40 XH1
41 XV1
SP 23
CR 21
INTERNAL RAM ADDRESS COUNTER
INTERNAL RAM ADDRESS COUNTER
ADDRESS DECODER
24-BIT x 14 WORDS RAM AREA
ADDRESS DECODER
ADDRESS COUNTER
TG
A3 - A0 8 - 5 4
A6 - A4 9 - 11 3
I/O BUFFER
EIAD 22
ROM ADDRESS COUNTER
DATA SELECTOR
10-BIT COUNTER
R/G/B DECODER
3 16, 14, 12
GP3 - GP1
XVCT 44
FDFM 25
20 - 18 TST3 - TST1
33 - 26, 15, 13 TO9 - TO0
HD 35
VD 34
RST PULSE GENERATOR
HRST
FDRST
FWRST
CLK 38
CK4

CXD8354R (SONY)

C-MOS DIGITAL ENCODER/GENLOCK

—TOP VIEW—


156
155
150
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130
125
120
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110
105
157
160
165
170
175
180
185
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195
200
205
208
104
100
95
90
85
80
75
70
65
60
55
53
1
5
10
15
20
25
30
35
40
45
50
52
VDD
GND
NC
NC
GND

INPUT

18M : 18 MHz CLOCK
2FH : 2fH
36M : 36 MHz CLOCK
ARDTI : AREA DETECT PULSE/SKIN TONE GATE
ASET : IIC ASET
BF : BURST FLAG
BLKG : BLANKING
BY0 - BY10 : B-Y DATA
CHAR : CHARACTER
CHRGT : CHARACTER GATE
DT0 - DT19 : DETAIL
EXTHD : EXTERNAL HD
EXTVD : EXTERNAL VD
FLDI : FIELD
HD : HORIZONTAL DRIVE
ICK : SCK
$\overline{\text{LALT}}$: LINE ALTERNATE
$\overline{\text{OE}}$: OUTPUT ENABLE
RY0 - RY10 : R-Y DATA
SCCI0 - SCCI7 : SUBCARRIER CONTROL
SYNC : SYNC
TCK : SELF-DIAGNOSIS CLOCK
TDI : SELF-DIAGNOSIS DATA
TEST : (CONNECT TO GROUND)
TMS : SELF-DIAGNOSIS MODE SELECT
TRST : SELF-DIAGNOSIS RESET
VD : VERTICAL DRIVE
Y0 - Y10 : Y DATA
VFI0 - VFI9 : VF

OUTPUT

ADHD : ADVANCED HD
ADVD : ADVANCED VD
ADVPBLK : ADVANCED PRE-BLANKING
ICS : IIC ACK
MARK : MARKER (OTHER THAN BOX CURSOR)
MKBC : MARKER (BOX CURSOR)
SCO0 - SCO7 : SERIAL SUBCARRIER
TDO : SELF-DIAGNOSIS DATA
TST0 - TST9 : TEST
VFO0 - VFO9 : VF

INPUT/OUTPUT

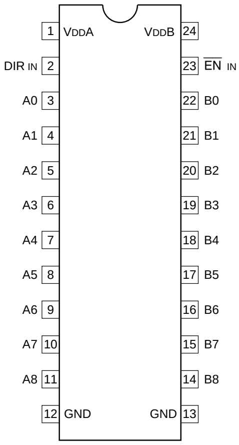
CLR : CLEAR
ICD : IIC DATA
MP0 - MP10 : MULTIPLEXED R-Y/B-Y DIRECTION CONTROL

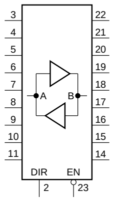
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	GND	53	—	VDD	105	—	GND	157	—	VDD
2	—	GND	54	I	Y10	106	—	GND	158	O	ADHD
3	—	VDD	55	I	Y9	107	O	MARK	159	O	ADVPBLK
4	O	DT19	56	I	Y8	108	—	VDD	160	O	MKBC
5	O	DT18	57	I	Y7	109	I	EXTHD	161	O	ADVD
6	O	DT17	58	I	Y6	110	I	EXTVD	162	—	GND
7	O	DT16	59	I	Y5	111	—	NC	163	O	ICS
8	O	DT15	60	I	Y4	112	I	ARDTI	164	—	NC
9	O	DT14	61	I	Y3	113	I	CHAR	165	I/O	ICD
10	O	DT13	62	I	Y2	114	I	CHRGT	166	—	VDD
11	O	DT12	63	I	Y1	115	—	VDD	167	I	ICK
12	O	DT11	64	I	Y0	116	I	SCCI7	168	—	NC
13	O	DT10	65	—	GND	117	I	SCCI6	169	O	TDO
14	—	VDD	66	I/O	MP0	118	I	SCCI5	170	—	NC
15	I	VFI9	67	I/O	MP1	119	I	SCCI4	171	I	TCK
16	I	VFI8	68	I/O	MP2	120	I	SCCI3	172	—	NC
17	I	VFI7	69	I/O	MP3	121	I	SCCI2	173	I	TDI
18	I	VFI6	70	I/O	MP4	122	I	SCCI1	174	—	NC
19	I	VFI5	71	I/O	MP5	123	I	SCCI0	175	I	TMS
20	I	VFI4	72	I/O	MP6	124	—	GND	176	—	NC
21	I	VFI3	73	I/O	MP7	125	O	SCO7	177	I	TRST
22	I	VFI2	74	I/O	MP8	126	O	SCO6	178	—	NC
23	I	VFI1	75	I/O	MP9	127	O	SCO5	179	I	ASET
24	I	VFI0	76	I/O	MP10	128	O	SCO4	180	—	NC
25	—	GND	77	—	GND	129	O	SCO3	181	I	$\overline{\text{OE}}$
26	—	GND	78	—	VDD	130	—	VDD	182	—	GND
27	—	VDD	79	—	GND	131	—	GND	183	—	VDD
28	I	BY10	80	O	VFO0	132	O	SCO2	184	I	TEST
29	I	BY9	81	O	VFO1	133	O	SCO1	185	—	NC
30	I	BY8	82	O	VFO2	134	O	SCO0	186	I/O	CLR
31	I	BY7	83	O	VFO3	135	—	GND	187	—	NC
32	I	BY6	84	O	VFO4	136	I	FLDI	188	—	NC
33	I	BY5	85	O	VFO5	137	—	NC	189	—	NC
34	I	BY4	86	O	VFO6	138	I	VD	190	—	NC
35	I	BY3	87	O	VFO7	139	—	NC	191	—	NC
36	I	BY2	88	O	VFO8	140	I	LALT	192	—	NC
37	I	BY1	89	O	VFO9	141	—	NC	193	—	NC
38	I	BY0	90	—	VDD	142	I	2FH	194	—	NC
39	—	GND	91	—	GND	143	—	VDD	195	—	VDD
40	I	RY10	92	O	TST0	144	I	BLKG	196	—	GND
41	I	RY9	93	O	TST1	145	—	NC	197	I	DT9
42	I	RY8	94	O	TST2	146	I	BF	198	I	DT8
43	I	RY7	95	O	TST3	147	—	NC	199	I	DT7
44	I	RY6	96	O	TST4	148	I	SYNC	200	I	DT6
45	I	RY5	97	O	TST5	149	—	NC	201	I	DT5
46	I	RY4	98	O	TST6	150	I	HD	202	I	DT4
47	I	RY3	99	O	TST7	151	—	GND	203	I	DT3
48	I	RY2	100	O	TST8	152	I	18M	204	I	DT2
49	I	RY1	101	O	TST9	153	—	VDD	205	I	DT1
50	I	RY0	102	—	GND	154	I	36M	206	I	DT0
51	—	GND	103	—	VDD	155	—	GND	207	—	GND
52	—	GND	104	—	VDD	156	—	GND	208	—	VDD

HD151015T (HITACHI) FLAT PACKAGE
HD151015TEL

C-MOS 9-BIT LEVEL SHIFTER/TRANSCEIVER WITH 3-STATE OUTPUTS

—TOP VIEW—


1 VDDA
2 DIR IN
3 A0
4 A1
5 A2
6 A3
7 A4
8 A5
9 A6
10 A7
11 A8
12 GND
24 VDDB
23 $\overline{\text{EN}}$ IN
22 B0
21 B1
20 B2
19 B3
18 B4
17 B5
16 B6
15 B7
14 B8
13 GND


3
4
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6
7
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9
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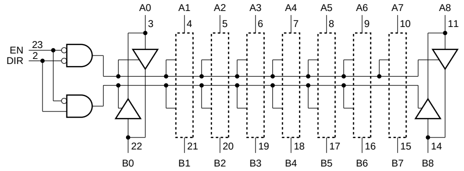
11
22
21
20
19
18
17
16
15
14
A
B
DIR
EN
2
23

EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	×	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE


A0
A1
A2
A3
A4
A5
A6
A7
A8
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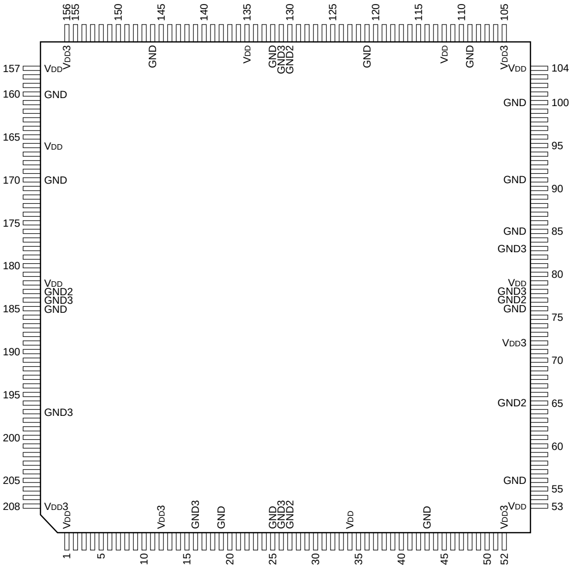
5
6
7
8
9
10
11
EN
DIR
23
2
22
21
20
19
18
17
16
15
14
B0
B1
B2
B3
B4
B5
B6
B7
B8

CXD8355AR (SONY)

HC-MOS AUTO WHITE/BLACK SHADING CORRECTION

—TOP VIEW—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195
200
205
208
104
100
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90
85
80
75
70
65
60
55
53
1
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10
15
20
25
30
35
40
45
50
52
VDD3
GND
VDD
GND3
GND2
GND
VDD
GND
VDD3
VDD
GND
VDD
GND
VDD
GND2
GND3
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VDD3
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GND2
GND
VDD3
GND2
GND
VDD
VDD3
VDD3
GND3
GND
GND
GND3
GND2
VDD
GND
VDD3

INPUT

ASET	: IIC ASET
B0 - B9	: B CHANNEL
CLK	: 18 MHz CLOCK
CLR	: POWER ON RESET
G0 - G9	: G CHANNEL
HD	: HORIZONTAL SYNC
R0 - R9	: R CHANNEL
STCK	: SELF-DIAGNOSIS CLOCK
STDI	: SELF-DIAGNOSIS DATA
STMS	: SELF-DIAGNOSIS MODE SELECT
STRST	: SELF-DIAGNOSIS RESET
TPA0 - TPA6	: (NO CONNECTION)
TPD0 - TPD7	: (NO CONNECTION)
TPA7, TPR	: (CONNECT TO GROUND)
TPW	: (NO CONNECTION)
VD	: VERTICAL SYNC

OUTPUT

A0 - A13	: RAM ADDRESS
ADHD	: ADVANCED HD
ADVD	: ADVANCED VD
BB0 - BB9	: B CHANNEL BLACK SHADING COMPENSATION DATA
BW0 - BW7	: B CHANNEL WHITE SHADING COMPENSATION DATA
FBB0 - FBB3	: B CHANNEL FEEDBACK CLAMP DATA
FBG0 - FBG3	: G CHANNEL FEEDBACK CLAMP DATA
FBR0 - FBR3	: R CHANNEL FEEDBACK CLAMP DATA
GB0 - GB9	: G CHANNEL BLACK SHADING COMPENSATION DATA
GW0 - GW7	: G CHANNEL WHITE SHADING COMPENSATION DATA
ICDS	: IIC ACK
$\overline{OE}$	: RAM OUTPUT ENABLE SIGNAL
RB0 - RB9	: R CHANNEL BLACK SHADING COMPENSATION DATA
RW0 - RW7	: R CHANNEL WHITE SHADING COMPENSATION DATA
TDO	: SELF-DIAGNOSIS DATA
TP1, TP2	: (NO CONNECTION)
TPOUT	: (NO CONNECTION)
TST0 - TST8	: TEST SAW/RECTANGLE
$\overline{WE}$	: RAM WRITE ENABLE SIGNAL

INPUT/OUTPUT

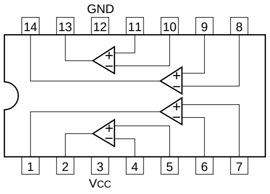
D0 - D7	: RAM DATA
ICCK	: IIC SCL
SICDT	: IIC SDA

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VDD	53	—	VDD	105	—	VDD3	157	—	VDD
2	I	B9	54	O	$\overline{WE}$	106	O	RW4	158	O	GB0
3	I	B8	55	O	$\overline{OE}$	107	O	RW3	159	O	TST8
4	I	B7	56	—	GND	108	O	RW2	160	—	GND
5	I	B6	57	I	TPD0	109	—	GND	161	O	TST7
6	I	B5	58	I	TPD1	110	O	RW1	162	O	TST6
7	I	B4	59	I	TPD2	111	O	RW0	163	O	TST5
8	I	B3	60	I	TPD3	112	—	VDD	164	O	TST4
9	I	B2	61	I	TPD4	113	O	GW7	165	O	TST3
10	I	B1	62	I	TPD5	114	O	GW6	166	—	VDD
11	I	B0	63	I	TPD6	115	O	GW5	167	O	TST2
12	—	VDD3	64	I	TPD7	116	O	GW4	168	O	TST1
13	I/O	ICCK	65	—	GND2	117	O	GW3	169	O	TST0
14	I/O	SICDT	66	I	TPW	118	O	GW2	170	—	GND
15	I	ASET	67	I	TPR	119	O	GW1	171	O	FBB3
16	—	GND3	68	I	TPA0	120	O	GW0	172	O	FBB2
17	O	ICDS	69	I	TPA1	121	—	GND	173	O	FBB1
18	O	TDO	70	I	TPA2	122	O	BB9	174	O	FBB0
19	—	GND	71	I	TPA3	123	O	BB8	175	O	FBR3
20	I	STCK	72	—	VDD3	124	O	BB7	176	O	FBR2
21	I	STDI	73	I	TPA4	125	O	BB6	177	O	FBR1
22	I	STMS	74	I	TPA5	126	O	BB5	178	O	FBR0
23	I	STRST	75	I	TPA6	127	O	BB4	179	O	FBG3
24	I	CLR	76	—	GND	128	O	BB3	180	O	FBG2
25	—	GND	77	—	GND2	129	O	BB2	181	O	FBG1
26	—	GND3	78	—	GND3	130	—	GND2	182	—	VDD
27	—	GND2	79	—	VDD	131	—	GND3	183	—	GND2
28	O	A13	80	I	TPA7	132	—	GND	184	—	GND3
29	O	A12	81	I	HD	133	O	BB1	185	—	GND
30	O	A11	82	I	VD	134	O	BB0	186	O	FBG0
31	O	A10	83	—	GND3	135	—	VDD	187	I	G9
32	O	A9	84	I	CLK	136	O	RB9	188	I	G8
33	O	A8	85	—	GND	137	O	RB8	189	I	G7
34	—	VDD	86	O	TP1	138	O	RB7	190	I	G6
35	O	A7	87	O	TP2	139	O	RB6	191	I	G5
36	O	A6	88	O	ADHD	140	O	RB5	192	I	G4
37	O	A5	89	O	ADVD	141	O	RB4	193	I	G3
38	O	A4	90	O	TPOUT	142	O	RB3	194	I	G2
39	O	A3	91	—	GND	143	O	RB2	195	I	G1
40	O	A2	92	O	BW7	144	O	RB1	196	I	G0
41	O	A1	93	O	BW6	145	O	RB0	197	—	GND3
42	O	A0	94	O	BW5	146	—	GND	198	I	R9
43	—	GND	95	O	BW4	147	O	GB9	199	I	R8
44	I/O	D7	96	O	BW3	148	O	GB8	200	I	R7
45	I/O	D6	97	O	BW2	149	O	GB7	201	I	R6
46	I/O	D5	98	O	BW1	150	O	GB6	202	I	R5
47	I/O	D4	99	O	BW0	151	O	GB5	203	I	R4
48	I/O	D3	100	—	GND	152	O	GB4	204	I	R3
49	I/O	D2	101	O	RW7	153	O	GB3	205	I	R2
50	I/O	D1	102	O	RW6	154	O	GB2	206	I	R1
51	I/O	D0	103	O	RW5	155	O	GB1	207	I	R0
52	—	VDD3	104	—	VDD	156	—	VDD3	208	—	VDD3

LM339NS (TI)FLAT PACKAGE
LM339NS-E05

QUAD COMPARATORS

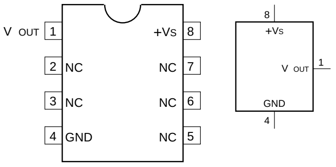
—TOP VIEW—


GND
14
13
12
11
10
9
8
1
2
3
4
5
6
7
VCC
+
−
+
−
+
−
+
−

LM35DM (NS)FLAT PACKAGE
LM35DMX

TEMPERATURE SENSOR

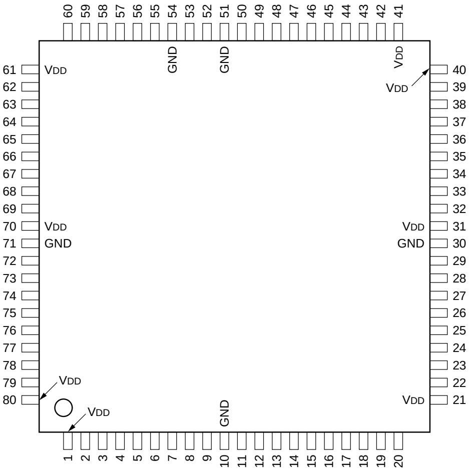
—TOP VIEW—


V OUT
1
2
3
4
NC
NC
GND
+Vs
NC
NC
NC
8
7
6
5
8
+Vs
V OUT
1
GND
4

CXD8858R (SONY)

HC-MOS SYNC GENERATOR

—TOP VIEW—


60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41
GND
GND
VDD
VDD
61 VDD
62
63
64
65
66
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68
69
70 VDD
71 GND
72
73
74
75
76
77
78
79 VDD
80
VDD
GND
40
39
38
37
36
35
34
33
32
VDD 31
GND 30
29
28
27
26
25
24
23
22
VDD 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VDD	21	—	VDD	41	—	VDD	61	—	VDD
2	I	HR	22	O	ACK	42	I	PRST	62	O	HCOM1
3	I	HRSEL	23	I/O	SDA	43	I	TEST4	63	O	HCOM2
4	O	HD	24	I	SCL	44	O	COM1EX	64	I	HPHS0
5	O	SYNC	25	I	ASET	45	O	COM2	65	I	HPHS1
6	O	BF	26	I	HBLK0	46	I	MODE1	66	I	HPHS2
7	O	BLKG	27	I	HBLK1	47	I	MODE2	67	I	HPHS3
8	O	FH2	28	I	HBLK2	48	I	TEST5	68	I	INTH
9	O	LALT	29	I	HBLK3	49	O	CK27O	69	O	DLHD
10	—	GND	30	—	GND	50	I	CK27I	70	—	VDD
11	O	VD	31	—	VDD	51	—	GND	71	—	GND
12	O	FLD1	32	I	VBLK0	52	O	TGC	72	I	TDI
13	O	DPBLKG	33	I	VBLK1	53	O	SCCOM	73	O	TDO
14	O	NBLKG	34	I	CK36I	54	—	GND	74	I	TCK
15	O	SYNC2	35	O	CK36O	55	I	INTSC	75	O	$\overline{N}$/P
16	O	SAMPLE	36	I	TEST3	56	I	TEST6	76	O	TESTO
17	O	FLD	37	I	CLKSL1	57	I	EXTSC	77	I	LALTR
18	I	TEST1	38	I	CLKLS2	58	O	INTEXT	78	I	VLRSEL
19	I	TEST2	39	O	CK18O	59	I	EXSYNC	79	I	VR
20	I	DTCNT	40	—	VDD	60	I	TEST7	80	—	VDD

INPUT

ASET : IIC ASET
CK27I : 27 MHz CLOCK
CK36I : 36 MHz CLOCK
CLKSL1, CLKLS2 : CLOCK FREQUENCY SELECT
DTCNT : DATA CONTROL
EXSYNC : EXTERNAL SYNC
EXTSC : EXTERNAL SUBCARRIER
HBLK0 - HBLK3 : H BLANKING WIDTH PULSE
HPHS0 - HPHS3 : H PHASE DATA
HR : H RESET
HRSEL : H RESET SELECT
INTH : PHASE CONTROLLED INTERNAL HD
INTSC : INTERNAL SUBCARRIER
LALTR : LINE ALTERNATE RESET
MODE1, MODE2 : MODE SELECT
PRST : POWER ON RESET
SCL : IIC CLOCK
TCK : TEST CLOCK
TDI : TEST DATA
VBLK0, VBLK1 : V BLANKING WIDTH PULSE
VLRSEL : V RESET/LALT RESET SELECT
VR : V RESET
TEST1 - TEST7 : TEST MODE

OUTPUT

ACK : IIC ACK
BF : BURST FLAG
BLKG : BLANKING
CK18O : 18 MHz CLOCK
CK27O : 27 MHz CLOCK
CK36O : 36 MHz CLOCK
COM1EX : PHASE COMPARATED CLOCK
COM2 : PHASE COMPARATED CLOCK
DLHD : PHASE COMPARATED INTERNAL HD
DPBLKG : D1/PRE BLANKING
FH2 : 2fH
FLD : FIELD
FLD1 : FIELD1
HCOM1, HCOM2 : FH/HR PHASE COMPARATED SIGNAL
HD : HORIZONTAL DRIVE
INTEXT : INT/EXT SYNCHRONIZE MODE SELECT
LALT : LINE ALTERNATE
$\overline{N}$/P : NTSC/PAL DISCRIMINATION SIGNAL
NBLKG : NARROW BLANKING
SAMPLE : SAMPLE
SCCOM : INT SC/EXT SC PHASE COMPARATED SIGNAL
SYNC : SYNC
SYNC2 : SYNC2
TDO : TEST DATA
TESTO : TEST MODE
TGC : BURST GATE PULSE
VD : VERTICAL DRIVE

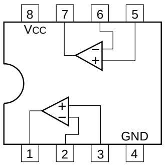
INPUT/OUTPUT

SDA : IIC DATA

LM393PS (TI)FLAT PACKAGE
LM393PS-E05

DUAL VOLTAGE COMPARATORS

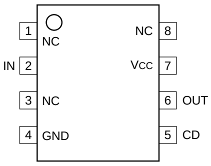
—TOP VIEW—

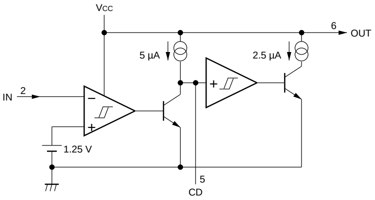

8
7
6
5
VCC
+
−
+
−
GND
1
2
3
4

M51958A (MITSUBISHI)FLAT PACKAGE
M51958A-T1
M51958AFP600D (MITSUBISHI)FLAT PACKAGE

VOLTAGE DETECT DELAY

—TOP VIEW—

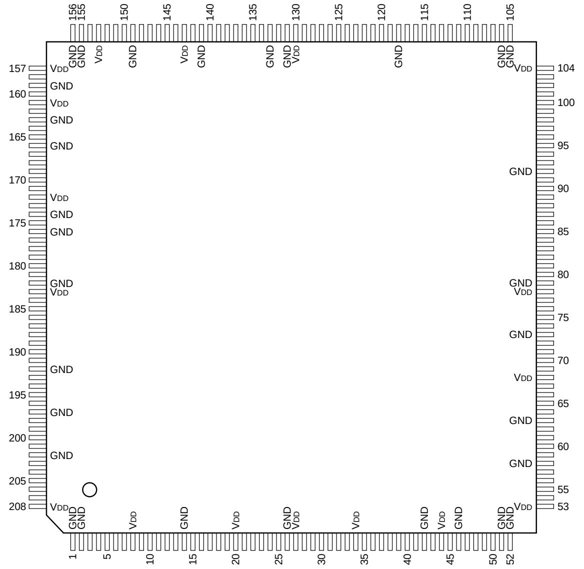

1 NC
IN 2
3 NC
4 GND
NC 8
VCC 7
6 OUT
5 CD


VCC
6
OUT
5 µA
2.5 µA
IN
2
−
+
+
1.25 V
5
CD

CXD8933AR (SONY)

C-MOS IMAGE ENHANCER

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	GND	53	—	VDD	105	—	GND	157	—	VDD
2	—	GND	54	O	DTL07	106	—	GND	158	O	SC
3	O	RO08	55	O	DTL06	107	I	BI11	159	—	GND
4	O	RO07	56	O	DTL05	108	I	GI00	160	I	EXTSC
5	O	RO06	57	O	DTL04	109	I	GI01	161	—	VDD
6	O	RO05	58	—	GND	110	I	GI02	162	I	EXTSYNC
7	O	RO04	59	O	DTL03	111	I	GI03	163	—	GND
8	—	VDD	60	O	DTL02	112	I	GI04	164	O	HCOM2
9	O	RO03	61	O	DTL01	113	I	GI05	165	O	HCOM1
10	O	RO02	62	O	DTL00	114	I	GI06	166	—	GND
11	O	RO01	63	—	GND	115	I	GI07	167	I	VRST
12	O	RO00	64	O	MPX13	116	I	GI08	168	O	CF
13	O	GO11	65	O	MPX12	117	I	GI09	169	O	TGC
14	—	GND	66	O	MPX11	118	—	GND	170	O	INTEXT
15	O	GO10	67	O	MPX10	119	I	GI10	171	O	CHARCLK
16	O	GO09	68	—	VDD	120	I	GI11	172	—	VDD
17	O	GO08	69	O	MPX09	121	I	RI00	173	I	TRST
18	O	GO07	70	O	MPX08	122	I	RI01	174	—	GND
19	O	GO06	71	O	MPX07	123	I	RI02	175	I	TCK
20	—	VDD	72	O	MPX06	124	I	RI03	176	—	GND
21	O	GO05	73	—	GND	125	I	RI04	177	I	TMS
22	O	GO04	74	O	MPX05	126	I	RI05	178	I	TDI
23	O	GO03	75	O	MPX04	127	I	BI06	179	O	TDO
24	O	GO02	76	O	MPX03	128	I	RI07	180	I	HDI
25	O	GO01	77	O	MPX02	129	I	RI08	181	I	VDI
26	—	GND	78	—	VDD	130	—	VDD	182	—	GND
27	—	VDD	79	—	GND	131	—	GND	183	—	VDD
28	O	GO00	80	O	MPX01	132	O	CLK18	184	I	RTEB
29	O	BO11	81	O	MPX00	133	—	GND	185	I	RTIN
30	O	BO10	82	I	STD23	134	I	RI09	186	O	SDAO
31	O	BO09	83	I	STD22	135	I	RI10	187	I	SDAI
32	O	BO08	84	I	STD21	136	I	RI11	188	I	SCL
33	O	BO07	85	I	STD20	137	O	OHBFLD	189	I	SLAO
34	—	VDD	86	I	STD13	138	O	OHBVD	190	I	SLAI
35	O	BO06	87	I	STD12	139	O	OHBHD	191	I	TEST
36	O	BO05	88	I	STD11	140	O	ASSV	192	—	GND
37	O	BO04	89	I	STD10	141	—	GND	193	O	VFD0
38	O	BO03	90	O	VDO	142	O	ACSH	194	O	VFD1
39	O	BO02	91	O	HDO	143	—	VDD	195	O	VFD2
40	O	BO01	92	—	GND	144	O	QBAR	196	O	VFD3
41	O	BO00	93	I	BI00	145	O	IBAR	197	—	GND
42	—	GND	94	I	BI01	146	O	CLAMP	198	O	VFD4
43	I	CLK	95	I	BI02	147	O	SAMPLE	199	O	VFD5
44	—	VDD	96	I	BI03	148	O	SYSYBLK	200	O	VFD6
45	I	PRST	97	I	BI04	149	—	GND	201	O	VFD7
46	—	GND	98	I	BI05	150	O	SYNC	202	—	GND
47	O	DTL11	99	I	RI06	151	O	BF	203	O	VFD8
48	O	DTL10	100	I	BI07	152	O	LALT	204	O	VFD9
49	O	DTL09	101	I	BI08	153	—	VDD	205	O	RO11
50	O	DTL08	102	I	BI09	154	I	FSC4	206	O	RO10
51	—	GND	103	I	BI10	155	—	GND	207	O	RO09
52	—	GND	104	—	VDD	156	—	GND	208	—	VDD

INPUT

BI00 - BI11	: B CHANNEL VIDEO DATA
CLK	: CLOCK
EXTSC	: EXTERNAL SUBCARRIER
EXTSYNC	: EXTERNAL SYNC
FSC4	: 4 fsc
GI00 - GI11	: G CHANNEL VIDEO DATA
HDI	: HORIZONTAL DRIVE
PRST	: POWER ON RESET
RI00 - RI11	: R CHANNEL VIDEO DATA
RTEB	: RAM TEST ENABLE
RTIN	: RAM TEST DATA
SCL	: IIC CLOCK
SDAI	: IIC DATA
SLAI	: SUB ADDRESS 2nd LSB
SLAO	: SUB ADDRESS LSB
STD10 - STD23	: SKIN TONE AREA
TCK	: BOUNDARY SCAN CLOCK
TDI	: BOUNDARY SCAN DATA
TEST	: TEST ENABLE
TMS	: BOUNDARY SCAN MODE
TRST	: BOUNDARY SCAN RESET
VDI	: VERTICAL DRIVE
VRST	: VERTICAL RESET

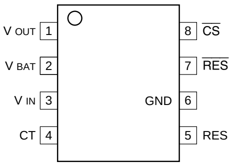
OUTPUT

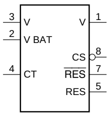
ACSH	: ASPECT RATIO CONVERSION CLOCK/HD
ASSV	: ASPECT RATIO CONVERSION SELECT PULSE/VD
BF	: BURST FLAG
BO00 - BO11	: B CHANNEL VIDEO DATA
CF	: COLOR FRAMING
CHARCLK	: CHARACTER GENERATOR CLOCK
CLAMP	: CLAMP PULSE
CLK18	: 18 MHz CLOCK
DTL00 - DTL11	: DETAIL SIGNAL
GO00 - GO11	: G CHANNEL VIDEO DATA
HCOMP1, HCOMP2	: HORIZONTAL SYNC PHASE COMPARATOR
HDO	: HORIZONTAL RESET
IBAR	: SMPTE I BAR FLAG
INTEXT	: SYNC GENERATOR INTERNAL/EXTERNAL
LALT	: LINE ALTERNATE
MPX00-MPX13	: DETECT DATA
OHBFLD	: FIELD
OHBHD	: HORIZONTAL RESET
OHBVD	: VERTICAL RESET
QBAR	: SMPTE Q BAR FLAG
RO00 - RO11	: R CHANNEL VIDEO DATA
SAMPLE	: SAMPLE PULSE
SC	: SUBCARRIER
SDAO	: SERIAL DATA
SYNCE	: SYNC PULSE
SYSYBLK	: SYSTEM BLANKING PULSE
TDO	: BOUNDARY SCAN DATA
TGC	: BURST GATE PULSE
VDO	: VERTICAL RESET
VFD0 - VFD9	: VF DETAIL SIGNAL

M62021FP (MITSUBISHI)FLAT PACKAGE

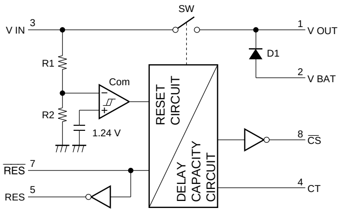
SELECTION SW BUILT-IN SYSTEM RESET

—TOP VIEW—



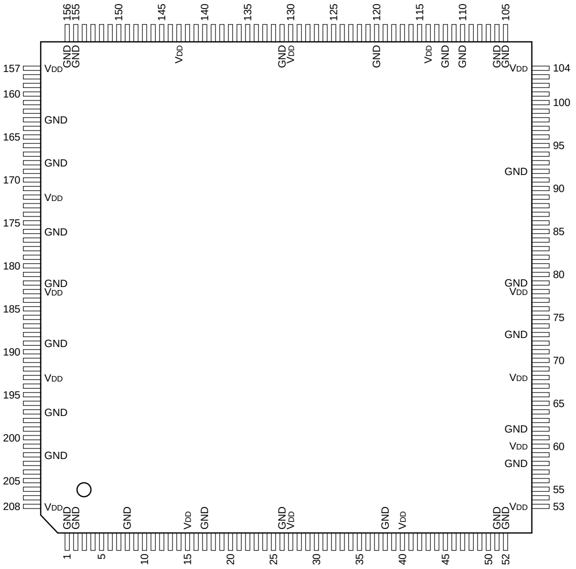


INPUT			**OUTPUT**		
CT	:	DELAY CAPACITY	CS	:	CHIP SELECT
VBAT	:	VIDEO SIGNAL BACKUP	RES	:	RESET
VIN	:	VIDEO SIGNAL	VOUT	:	VIDEO SIGNAL



CXD8934AR (SONY)

C-MOS PROCESSER
—TOP VIEW—


156
155
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200
205
208
104
100
95
90
85
80
75
70
65
60
55
53
1
5
10
15
20
25
30
35
40
45
50
52
VDD
GND
GND
VDD
VDD
GND
GND
GND
VDD
GND
VDD
GND
GND

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	GND	53	—	VDD	105	—	GND	157	—	VDD
2	—	GND	54	I	$\overline{\text{TE}}$	106	—	GND	158	O	GPO00
3	O	BPO08	55	I	SCLM	107	I	DTL09	159	O	GPO01
4	O	BPO09	56	I	SDAMI	108	I	DTL10	160	O	GPO02
5	O	ZO	57	O	SDAMO	109	I	DTL11	161	O	GPO03
6	O	MK1O	58	—	GND	110	—	GND	162	O	GPO04
7	O	MK2O	59	I	TRST	111	I	CLK	163	—	GND
8	—	GND	60	—	VDD	112	—	GND	164	O	GPO05
9	I	SYNCI	61	I	TCK	113	I	$\overline{\text{POR}}$	165	O	GPO06
10	I	TLI	62	—	GND	114	—	VDD	166	O	GPO07
11	I	TLBI	63	I	TMS	115	I	BPI00	167	O	GPO08
12	O	VDO	64	I	TDI	116	I	BPI01	168	—	GND
13	O	HDO	65	O	TDO	117	I	BPI02	169	O	GPO09
14	O	SKD	66	I	HDI	118	I	BPI03	170	O	YPO00
15	—	VDD	67	I	VDI	119	I	BPI04	171	O	YPO01
16	O	CK18	68	—	VDD	120	—	GND	172	—	VDD
17	—	GND	69	O	DET10	121	I	BPI05	173	O	YPO02
18	I	PDA8	70	O	DET11	122	I	BPI06	174	O	YPO03
19	I	PDA7	71	O	DET12	123	I	BPI07	175	O	YPO04
20	I	PDA6	72	O	DET13	124	I	BPI08	176	—	GND
21	I	PDA5	73	—	GND	125	I	BPI09	177	O	YPO05
22	I	PDA4	74	O	DET20	126	I	BPI10	178	O	YPO06
23	I	PDA3	75	O	DET21	127	I	BPI11	179	O	YPO07
24	I	PDA2	76	O	DET22	128	I	GPI00	180	O	YPO08
25	I	PDA1	77	O	DET23	129	I	GPI01	181	O	YPO09
26	—	GND	78	—	VDD	130	—	VDD	182	—	GND
27	—	VDD	79	—	GND	131	—	GND	183	—	VDD
28	I	PDA0	80	I	MPXI00	132	I	GPI02	184	O	YPO10
29	I/O	PDI7	81	I	MPXI01	133	I	GPI03	185	O	YPO11
30	I/O	PDI6	82	I	MPXI02	134	I	GPI04	186	O	RPO00
31	I/O	PDI5	83	I	MPXI03	135	I	GPI05	187	O	RPO01
32	I/O	PDI4	84	I	MPXI04	136	I	GPI06	188	O	RPO02
33	I/O	PDI3	85	I	MPXI05	137	I	GPI07	189	—	GND
34	I/O	PDI2	86	I	MPXI06	138	I	GPI08	190	O	RPO03
35	I/O	PDI1	87	I	MPXI07	139	I	GPI09	191	O	RPO04
36	I/O	PDI0	88	I	MPXI08	140	I	GPI10	192	O	RPO05
37	I	PORS	89	I	MPXI09	141	I	GPI11	193	—	VDD
38	—	GND	90	I	MPXI10	142	I	RPI00	194	O	RPO06
39	I	$\overline{\text{WE}}$	91	I	MPXI11	143	—	VDD	195	O	RPO07
40	—	VDD	92	—	GND	144	I	RPI01	196	O	RPO08
41	I	$\overline{\text{CE}}$	93	I	MPXI12	145	I	RPI02	197	—	GND
42	I	$\overline{\text{RE}}$	94	I	MPXI13	146	I	RPI03	198	O	RPO09
43	I	SCLI	95	I	DTL00	147	I	RPI04	199	O	BPO00
44	I	SDAII	96	I	DTL01	148	I	RPI05	200	O	BPO01
45	O	SDAIO	97	I	DTL02	149	I	RPI06	201	O	BPO02
46	I	IRC	98	I	DTL03	150	I	RPI07	202	—	GND
47	I	SLAI	99	I	DTL04	151	I	RPI08	203	O	BPO03
48	I	SLAM	100	I	DTL05	152	I	RPI09	204	O	BPO04
49	I	TEN	101	I	DTL06	153	I	RPI10	205	O	BPO05
50	I	TIN	102	I	DTL07	154	I	RPI11	206	O	BPO06
51	—	GND	103	I	DTL08	155	—	GND	207	O	BPO07
52	—	GND	104	—	VDD	156	—	GND	208	—	VDD

CXD8934AR (3/3)

INPUT

BPI00 - BPI11 : B CHANNEL SIGNAL
$\overline{\text{CE}}$: L: PARALLEL I/O CHIP ENABLE
CLK : MASTER CLOCK
DTL00 - DTL11 : DETAIL
GPI00 - GPI11 : G CHANNEL SIGNAL
HDI : HORIZONTAL DRIVE
IRC : IRIS CPU PRESENCE
MPXI00 - MPXI13 : DETECTION MULTIPLEX
PDA0 - PDA8 : PARALLEL DATA ADDRESS
$\overline{\text{POR}}$: L: POWER ON RESET
PORS : PARALLEL I/O ; SERIAL I/O SELECT
RPI00 - RPI11 : R CHANNEL SIGNAL
$\overline{\text{RE}}$: L: PARALLEL I/O READ ENABLE
SCLI : SERIAL I/O IRIS CLOCK
SCLM : SERIAL I/O MAIN CLOCK
SDAII : SERIAL I/O IRIS DATA
SDAMI : SERIAL I/O MAIN DATA
SLAI : IRIS SERIAL I/O LOCAL ADDRESS
SLAM : MAIN SERIAL I/O LOCAL ADDRESS
SYNCI : SYNC
TCK : BOUNDARY SCAN CLOCK
TDI : BOUNDARY SCAN TEST DATA
$\overline{\text{TE}}$: L: RAM TEST ENABLE
TEN : TEST ENABLE
TIN : RAM TEST
TLBI : TITLE BACK
TLI : TITLE
TMS : BOUNDARY SCAN MODE
TRST : BOUNDARY SCAN RESET
VDI : VERTICAL DRIVE
$\overline{\text{WE}}$: L: PARALLEL I/O WRITE ENABLE

OUTPUT

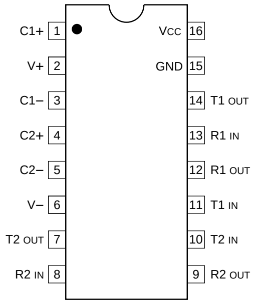
BPO00 - BPO09 : B SIGNAL
CK18 : DIVIDED-BY-TWO CLOCK
DET10 - DET23 : COLOR DETECTION SIGNAL
GPO00 - GPO09 : G SIGNAL
HDO : HORIZONTAL DRIVE
MK1O, MK2O : MARKER1, 2
RPO00 - RPO09 : R SIGNAL
SDAIO : SERIAL I/O IRIS DATA
SDAMO : SERIAL I/O MAIN DATA
SKD : DOMAIN OF COLOR DETECTION
TDO : BOUNDARY SCAN TEST DATA
VDO : VERTICAL DRIVE
YPO00 - YPO11 : Y SIGNAL
ZO : ZEBRA SIGNAL

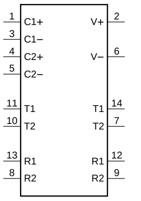
INPUT/OUTPUT

PDI0 - PDI7 : PARALLEL I/O DATA

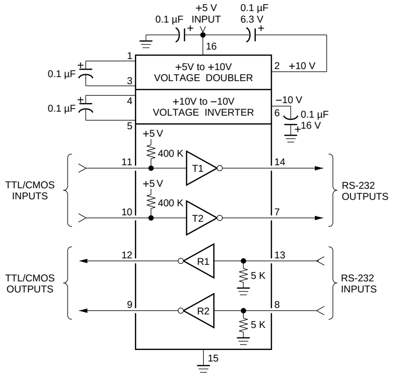
MAX202CSE (MAXIM)
MAX202CSE-T

RS-232 TRANSMITTER/RECEIVER
—TOP VIEW—


C1+ 1
V+ 2
C1− 3
C2+ 4
C2− 5
V− 6
T2 OUT 7
R2 IN 8
VCC 16
GND 15
14 T1 OUT
13 R1 IN
12 R1 OUT
11 T1 IN
10 T2 IN
9 R2 OUT


1 C1+
3 C1−
4 C2+
5 C2−
11 T1
10 T2
13 R1
8 R2
V+ 2
V− 6
T1 14
T2 7
R1 12
R2 9

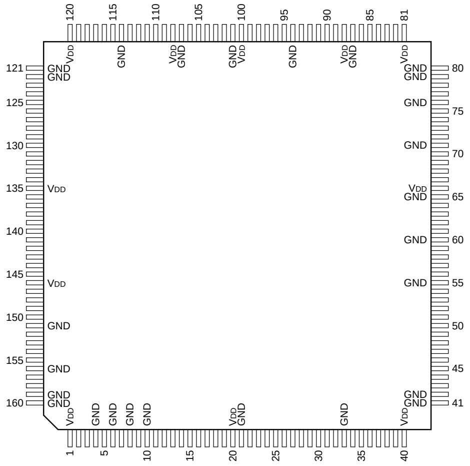
R1, 2 : RECEIVER 1, 2
T1, 2 : TRANSMITTER 1, 2


+5 V INPUT
0.1 µF
0.1 µF 6.3 V
16
1
3
+5V to +10V VOLTAGE DOUBLER
2 +10 V
0.1 µF
4
+10V to −10V VOLTAGE INVERTER
5
−10 V
6
0.1 µF 16 V
+5 V
400 K
11
T1
14
TTL/CMOS INPUTS
+5 V
400 K
10
T2
7
RS-232 OUTPUTS
12
R1
13
5 K
TTL/CMOS OUTPUTS
RS-232 INPUTS
9
R2
8
5 K
15

CXD9058R (SONY)

C-MOS ASPECT RATIO CONVERTER

—TOP VIEW—


120
115
110
105
100
95
90
85
81
VDD
GND
VDD
GND
GND
VDD
GND
VDD
GND
VDD
121
GND
GND
125
130
135
VDD
140
145
VDD
150
GND
155
GND
160
GND
GND
VDD
GND
GND
GND
GND
VDD
GND
GND
VDD
GND
GND
80
GND
75
GND
70
VDD
GND
65
GND
60
GND
55
50
45
GND
GND
41
1
5
10
15
20
25
30
35
40

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VDD	41	—	GND	81	—	VDD	121	—	GND
2	I	DLI1	42	—	GND	82	O	SCO09	122	—	GND
3	I	DLI0	43	I	SCK	83	O	SCO08	123	I	SCI11
4	—	GND	44	I	SMC	84	O	SCO07	124	I	SCI10
5	I	CK1I	45	I	SIN	85	O	SCO06	125	I	SCI09
6	—	GND	46	O	SOT	86	O	SCO05	126	I	SCI08
7	I	HRI	47	I	AMC	87	—	GND	127	I	SCI07
8	—	GND	48	I	TEB	88	—	VDD	128	I	SCI06
9	I	CK2I	49	I	TIN	89	O	SCO04	129	I	SCI05
10	—	GND	50	I	SCLI	90	O	SCO03	130	I	SCI04
11	I	PSS	51	I	SDAI	91	O	SCO02	131	I	SCI03
12	I	PWEB	52	O	SDAO	92	O	SCO01	132	I	SCI02
13	I	PREB	53	I	SLA1	93	O	SCO00	133	I	SCI01
14	I	PCEB	54	I	SLA0	94	—	GND	134	I	SCI00
15	I	PA7	55	—	GND	95	O	SBO09	135	—	VDD
16	I	PA6	56	I	CCI3	96	O	SBO08	136	I	SABI09
17	I	PA5	57	I	CCI2	97	O	SBO07	137	I	SABI08
18	I	PA4	58	I	CCI1	98	O	SBO06	138	I	SABI07
19	I	PA3	59	I	CCI0	99	O	SBO05	139	I	SABI06
20	—	VDD	60	—	GND	100	—	VDD	140	I	SABI05
21	—	GND	61	I	CABI3	101	—	GND	141	I	SABI04
22	I	PA2	62	I	CABI2	102	O	SBO04	142	I	SABI03
23	I	PA1	63	I	CABI1	103	O	SBO03	143	I	SABI02
24	I	PA0	64	I	CABI0	104	O	SBO02	144	I	SABI01
25	I/O	PD7	65	—	GND	105	O	SBO01	145	I	SABI00
26	I/O	PD6	66	—	VDD	106	O	SBO00	146	—	VDD
27	I/O	PD5	67	O	CCO3	107	—	GND	147	O	VDCO
28	I/O	PD4	68	O	CCO2	108	—	VDD	148	O	HDCO
29	I/O	PD3	69	O	CCO1	109	O	SAO09	149	O	VDBO
30	I/O	PD2	70	O	CCO0	110	O	SAO08	150	O	HDBO
31	I/O	PD1	71	—	GND	111	O	SAO07	151	—	GND
32	I/O	PD0	72	O	CABO3	112	O	SAO06	152	O	VDAO
33	—	GND	73	O	CABO2	113	O	SAO05	153	O	HDAO
34	I	TDI	74	O	CABO1	114	—	GND	154	O	DLO1
35	I	TCK	75	O	CABO0	115	O	SAO04	155	O	DLO0
36	I	TMS	76	—	GND	116	O	SAO03	156	—	GND
37	I	TRST	77	O	SCO11	117	O	SAO02	157	I	VDI
38	O	TDO	78	O	SCO10	118	O	SAO01	158	I	HDI
39	I	PORB	79	—	GND	119	O	SAO00	159	—	GND
40	—	VDD	80	—	GND	120	—	VDD	160	—	GND

INPUT

AMC : SCAN TEST ATG MODE
CABI0 - CABI3 : RINGING CONTROL COEFFICIENT
CCI0 - CCI3 : RINGING CONTROL COEFFICIENT
CK1I, CK2I : CLOCK
DLI0, DLI1 : DELAY SIGNAL
HDI : HORIZONTAL DRIVE
HRI : HORIZONTAL RESET
PA0 - PA7 : PARALLEL INTERFACE ADDRESS BUS
PCEB : PARALLEL INTERFACE BUS CHIP ENABLE PULSE
PORB : POWER ON RESET
PREB : PARALLEL INTERFACE BUS READ ENABLE PULSE
PSS : CPU INTERFACE BUS SELECT
PWEB : PARALLEL INTERFACE BUS WRITE ENABLE PULSE
SABI00 - SABI09 : VIDEO SIGNAL
SCI00 - SCI11 : VIDEO SIGNAL
SCK : SCAN TEST CLOCK
SCLI : IIC SERIAL INTERFACE BUS CLOCK
SDAI : IIC SERIAL INTERFACE BUS DATA
SIN : SCAN TEST SHIFT REGISTER
SLA0, SLA1 : IIC SERIAL INTERFACE CUS ADDRESS
SMC : SCAN TEST MODE
TCK : BOUNDARY SCAN (JTAG) CLOCK
TDI : BOUNDARY SCAN (JTAG) DATA
TEB : INTERNAL RAM TEST
TIN : INTERNAL RAM TEST
TMS : BOUNDARY SCAN (JTAG) MODE
TRST : BOUNDARY SCAN (JTAG) RESET
VDI : VERTICAL DRIVE

OUTPUT

CABO0 - CABO3 : RINGING CONTROL COEFFICIENT
CCO0 - CCO3 : RINGING CONTROL COEFFICIENT
DLO0, DLO1 : DELAY SIGNAL
HDAO : HORIZONTAL DRIVE
HDBO : HORIZONTAL DRIVE
HDCO : HORIZONTAL DRIVE
SAO00 - SAO09 : VIDEO SIGNAL
SBO00 - SBO09 : VIDEO SIGNAL
SCO00 - SCO11 : VIDEO SIGNAL
SDAO : IIC SERIAL INTERFACE BUS DATA
SOT : SCAN TEST SHIFT REGISTER
TDO : BOUNDARY SCAN (JTAG) DATA
VDAO : VERTICAL DRIVE
VDBO : VERTICAL DRIVE
VDCO : VERTICAL DRIVE

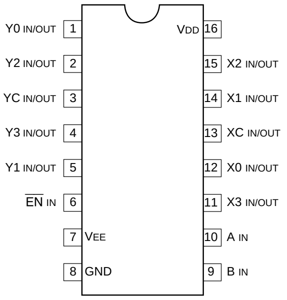
INPUT/OUTPUT

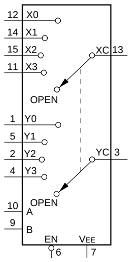
PD0 - PD7 : PARALLEL INTERFACE DATA BUS

MC74HC4052DTR2 (MOTOROLA)FLAT PACKAGE
TC74HC4052AFT(EL) (TOSHIBA)

C-MOS DUAL 4-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER

—TOP VIEW—


Y0 IN/OUT 1
Y2 IN/OUT 2
YC IN/OUT 3
Y3 IN/OUT 4
Y1 IN/OUT 5
EN IN 6
7 VEE
8 GND
VDD 16
15 X2 IN/OUT
14 X1 IN/OUT
13 XC IN/OUT
12 X0 IN/OUT
11 X3 IN/OUT
10 A IN
9 B IN


12 X0
14 X1
15 X2
11 X3
XC 13
OPEN
1 Y0
5 Y1
2 Y2
4 Y3
YC 3
OPEN
10 A
9 B
EN 6
VEE 7

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	×	×	OPEN

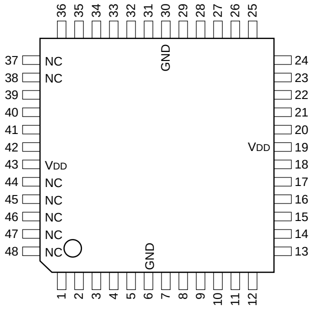
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

http://getMANUAL.com

CXK1203AR (SONY)
CXK1203AR-T4

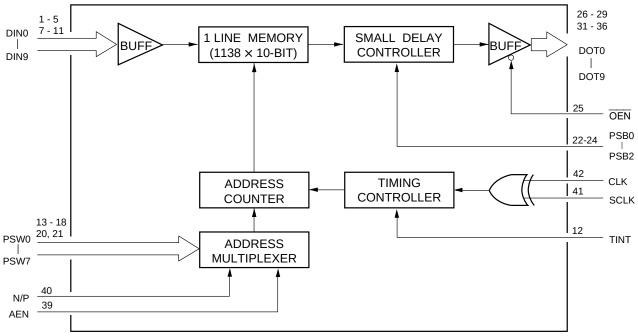
C-MOS DIGITAL LINE MEMORY

—TOP VIEW—


36
35
34
33
32
31
30
29
28
27
26
25
37 NC
38 NC
39
40
41
42
43 VDD
44 NC
45 NC
46 NC
47 NC
48 NC
GND
VDD
GND
24
23
22
21
20
19
18
17
16
15
14
13
1
2
3
4
5
6
7
8
9
10
11
12

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	D0	13	I	PSW7	25	I	$\overline{\text{OEN}}$	37	—	NC
2	I	D1	14	I	PSW6	26	O	DOT9	38	—	NC
3	I	D2	15	I	PSW5	27	O	DOT8	39	I	AEN
4	I	D3	16	I	PSW4	28	O	DOT7	40	I	N/P
5	I	D4	17	I	PSW3	29	O	DOT6	41	I	SCLK
6	—	GND	18	I	PSW2	30	—	GND	42	I	CLK
7	I	D5	19	—	VDD	31	O	DOT5	43	—	VDD
8	I	D6	20	I	PSW1	32	O	DOT4	44	—	NC
9	I	D7	21	I	PSW0	33	O	DOT3	45	—	NC
10	I	D8	22	I	PSB2	34	O	DOT2	46	—	NC
11	I	D9	23	I	PSB1	35	O	DOT1	47	—	NC
12	I	TINT	24	I	PSB0	36	O	DOT0	48	—	NC

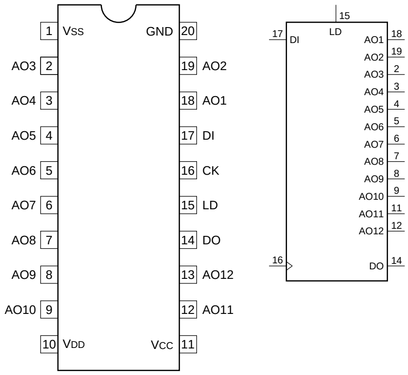
AEN : LINE MEMORY SELECT
CLK : CLOCK
DIN0 - DIN9 : VIDEO DATA INPUT
DOT0 - DOT9 : VIDEO DATA OUTPUT
N/P : NTSC/PAL/SECAM SELECT
OEN : OUTPUT ENABLE
PSB0 - PSB2 : DELAY STEP SELECT (1-BITxN)
PSW0 - PSW7 : DELAY STEP SELECT (8-BITxN)
SCLK : CLOCK EDGE SELECT
TINT : TEST


DIN0
|
DIN9
1 - 5
7 - 11
BUFF
1 LINE MEMORY
(1138 × 10-BIT)
SMALL DELAY
CONTROLLER
BUFF
26 - 29
31 - 36
DOT0
|
DOT9
25
OEN
22-24
PSB0
|
PSB2
42
CLK
41
SCLK
12
TINT
ADDRESS
COUNTER
TIMING
CONTROLLER
13 - 18
20, 21
PSW0
|
PSW7
ADDRESS
MULTIPLEXER
40
N/P
39
AEN

M62352GP (MITSUBISHI)FLAT PACKAGE
M62352GP-75ED

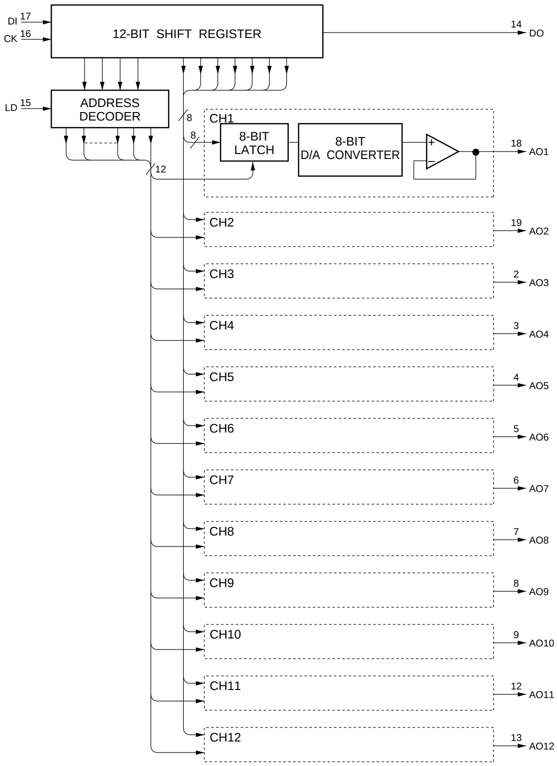
C-MOS 8-BIT × 12 CHANNEL D/A CONVERTER
(WITH BUFFER OPERATIONAL AMPLIFIER)

—TOP VIEW—


1 VSS
GND 20
AO3 2
19 AO2
AO4 3
18 AO1
AO5 4
17 DI
AO6 5
16 CK
AO7 6
15 LD
AO8 7
14 DO
AO9 8
13 AO12
AO10 9
12 AO11
10 VDD
VCC 11
15
17
DI
LD
AO1 18
AO2 19
AO3 2
AO4 3
AO5 4
AO6 5
AO7 6
AO8 7
AO9 8
AO10 9
AO11 11
AO12 12
16
DO 14

AO1 - AO12 : 8-BIT D/A OUTPUTS
CK : CLOCK INPUT
DI : SERIAL DATA INPUT
DO : DATA OUTPUT

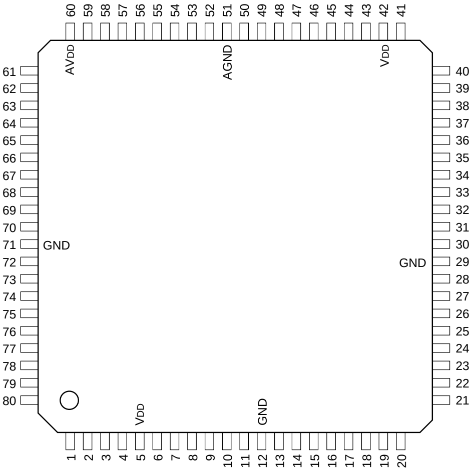
NOTE:
$3.5\text{ V} < V_{DD} < V_{CC}$
$-3.5\text{ V} < V_{SS} < V_{CC}$


DI 17
CK 16
12-BIT SHIFT REGISTER
14 DO
LD 15
ADDRESS
DECODER
8
8
12
CH1
8-BIT
LATCH
8-BIT
D/A CONVERTER
18 AO1
CH2
19 AO2
CH3
2 AO3
CH4
3 AO4
CH5
4 AO5
CH6
5 AO6
CH7
6 AO7
CH8
7 AO8
CH9
8 AO9
CH10
9 AO10
CH11
12 AO11
CH12
13 AO12

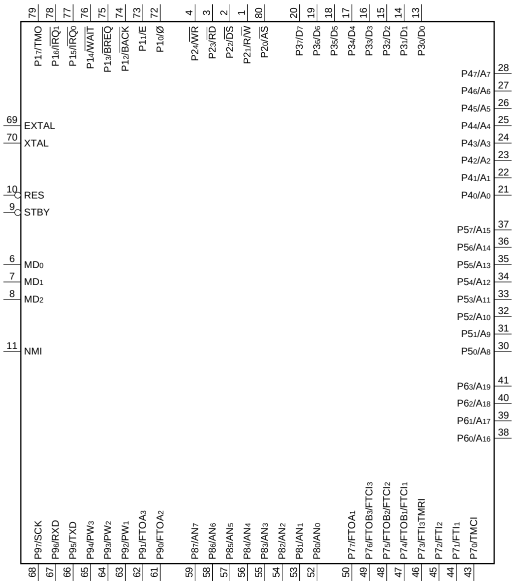
HD6475328F10 (HITACHI)

C-MOS 16-BIT MICROPROCESSOR

—TOP VIEW—


AV$_{DD}$
AGND
V$_{DD}$
GND
GND
V$_{DD}$
GND

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I/O	P21/R/$\overline{W}$	28	I/O	P47/A7	55	I/O	P83/AN3
2	I/O	P22/$\overline{DS}$	29	—	GND	56	I/O	P84/AN4
3	I/O	P23/$\overline{RD}$	30	I/O	P50/A8	57	I/O	P85/AN5
4	I/O	P24/$\overline{WR}$	31	I/O	P51/A9	58	I/O	P86/AN6
5	—	V$_{DD}$	32	I/O	P52/A10	59	I/O	P87/AN7
6	I	MD0	33	I/O	P53/A11	60	—	AV$_{DD}$
7	I	MD1	34	I/O	P54/A12	61	I/O	P90/FTOA2
8	I	MD2	35	I/O	P55/A13	62	I/O	P91/FTOA3
9	I	$\overline{STBY}$	36	I/O	P56/A14	63	I/O	P92/PW1
10	I	$\overline{RES}$	37	I/O	P57/A15	64	I/O	P93/PW2
11	I	NMI	38	I/O	P60/A16	65	I/O	P94/PW3
12	—	GND	39	I/O	P61/A17	66	I/O	P95/TXD
13	I/O	P30/D0	40	I/O	P62/A18	67	I/O	P96/RXD
14	I/O	P31/D1	41	I/O	P63/A19	68	I/O	P97/SCK
15	I/O	P32/D2	42	—	V$_{DD}$	69	I	EXTAL
16	I/O	P33/D3	43	I/O	P70/TMCI	70	I	XTAL
17	I/O	P34/D4	44	I/O	P71/FTI1	71	—	V$_{SS}$
18	I/O	P35/D5	45	I/O	P72/FTI2	72	I/O	P10/ø
19	I/O	P36/D6	46	I/O	P73/FTI3/TMRI	73	I/O	P11/E
20	I/O	P37/D7	47	I/O	P74/FTOB1/FTCI1	74	I/O	P12/$\overline{BACK}$
21	I/O	P40/A0	48	I/O	P75/FTOB2/FTCI2	75	I/O	P12/$\overline{BREQ}$
22	I/O	P41/A1	49	I/O	P76/FTOB3/FTCI3	76	I/O	P12/$\overline{WAIT}$
23	I/O	P42/A2	50	O	P77/FTOA1	77	I/O	P12/$\overline{IRQ0}$
24	I/O	P43/A3	51	—	AGND	78	I/O	P12/$\overline{IRQ1}$
25	I/O	P44/A4	52	I/O	P80/AN0	79	I/O	P12/TMO
26	I/O	P45/A5	53	I/O	P81/AN1	80	I/O	P12/$\overline{AS}$
27	I/O	P46/A6	54	I/O	P82/AN2			


P1$_7$/TMO
P1$_6$/$\overline{IRQ_1}$
P1$_5$/$\overline{IRQ_0}$
P1$_4$/$\overline{WAIT}$
P1$_3$/$\overline{BREQ}$
P1$_2$/$\overline{BACK}$
P1$_1$/E
P1$_0$/Ø
P2$_4$/$\overline{WR}$
P2$_3$/$\overline{RD}$
P2$_2$/$\overline{DS}$
P2$_1$/R/$\overline{W}$
P2$_0$/$\overline{AS}$
P3$_7$/D$_7$
P3$_6$/D$_6$
P3$_5$/D$_5$
P3$_4$/D$_4$
P3$_3$/D$_3$
P3$_2$/D$_2$
P3$_1$/D$_1$
P3$_0$/D$_0$
EXTAL
XTAL
RES
STBY
MD$_0$
MD$_1$
MD$_2$
NMI
P4$_7$/A$_7$
P4$_6$/A$_6$
P4$_5$/A$_5$
P4$_4$/A$_4$
P4$_3$/A$_3$
P4$_2$/A$_2$
P4$_1$/A$_1$
P4$_0$/A$_0$
P5$_7$/A$_{15}$
P5$_6$/A$_{14}$
P5$_5$/A$_{13}$
P5$_4$/A$_{12}$
P5$_3$/A$_{11}$
P5$_2$/A$_{10}$
P5$_1$/A$_9$
P5$_0$/A$_8$
P6$_3$/A$_{19}$
P6$_2$/A$_{18}$
P6$_1$/A$_{17}$
P6$_0$/A$_{16}$
P9$_7$/SCK
P9$_6$/RXD
P9$_5$/TXD
P9$_4$/PW$_3$
P9$_3$/PW$_2$
P9$_2$/PW$_1$
P9$_1$/FTOA$_3$
P9$_0$/FTOA$_2$
P8$_7$/AN$_7$
P8$_6$/AN$_6$
P8$_5$/AN$_5$
P8$_4$/AN$_4$
P8$_3$/AN$_3$
P8$_2$/AN$_2$
P8$_1$/AN$_1$
P8$_0$/AN$_0$
P7$_7$/FTOA$_1$
P7$_6$/FTOB$_3$/FTCI$_3$
P7$_5$/FTOB$_2$/FTCI$_2$
P7$_4$/FTOB$_1$/FTCI$_1$
P7$_3$/FTI$_3$TMRI
P7$_2$/FTI$_2$
P7$_1$/FTI$_1$
P7$_0$/TMCI

INPUT

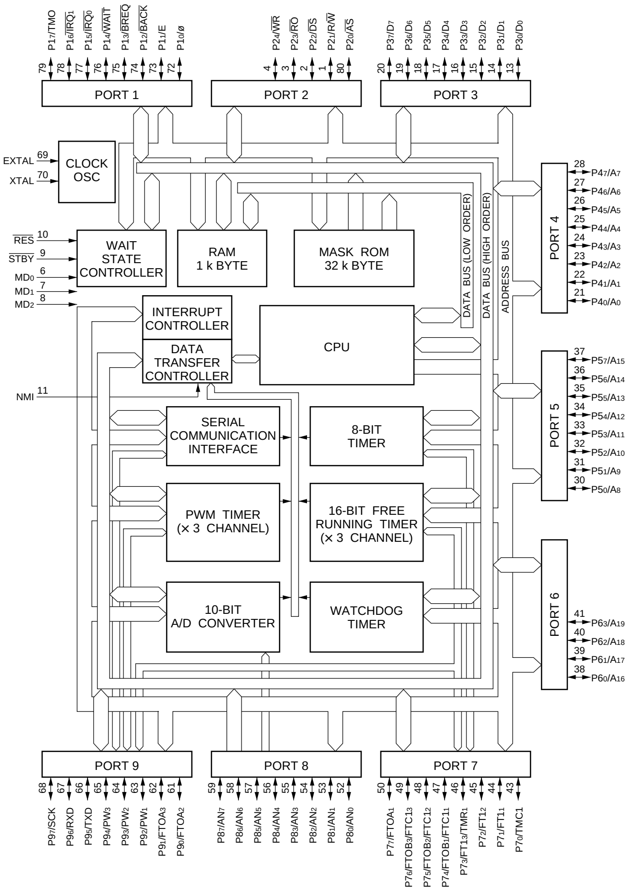
AN0 - AN7	; ANALOG INPUT
BREQ	; BUS REQUEST
EXTAL	; CONNECTED TO CRYSTAL OSCILLATOR.
ETCI1 - FTCI3	; FRT COUNTER CLOCK INPUT (CHANNEL 1 TO 3)
FTI1 - FTI3	; FRT INPUT CAPTURE INPUT (CHANNEL 1 TO 3)
IRQ0, 1	; INTERRUPTION REQUEST 0 AND 1
MD0 - MD2	; MODE SETTING
NMI	; NON MASKABLE INTERRUPTION
P80 - P87	; PORT 8
RES	; RESET
RXD	; RECEIVE DATA
STBY	; STANDBY
TMCI	; 8-BIT TIMER CLOCK INPUT
TMRI	; 8-BIT TIMER COUNTER RESET INPUT
WAIT	; WAIT
XTAL	; CONNECTED TO CRYSTAL OSCILLATOR.

OUTPUT

A0 - A19	; ADDRESS BUS
AS	; ADDRESS STROBE
BACK	; BUS REQUEST ACKNOWLEDGE
DS	; DATA STROBE
E	; ENABLE CLOCK
FTOA1 - FTOA3	; FRT OUTPUT COMPARE A OUTPUT (CHANNEL 1 TO 3)
FTOB1 - FTOB3	; FRT OUTPUT COMPARE B OUTPUT (CHANNEL 1 TO 3)
PW1 - PW3	; PWM TIMER OUTPUT (CHANNEL 1 TO 3)
R/W	; READ/WRITE
RD	; READ
TMO	; 8-BIT TIMER OUTPUT
TXD	; SEND DATA
WR	; WRITE
ø	; SYSTEM CLOCK

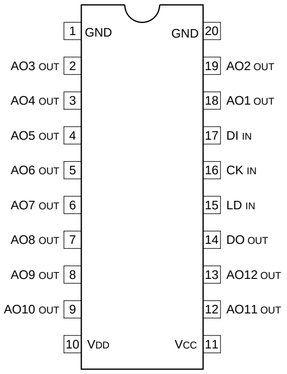
INPUT/OUTPUT

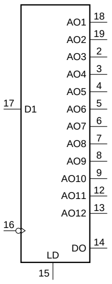
D0 - D7	; DATA BUS
P10 - P17	; PORT 1
P20 - P24	; PORT 2
P30 - P37	; PORT 3
P40 - P47	; PORT 4
P50 - P57	; PORT 5
P60 - P63	; PORT 6
P70 - P77	; PORT 7
P90 - P97	; PORT 9
SCK	; SERIAL CLOCK INPUT/OUTPUT


PORT 1
PORT 2
PORT 3
PORT 4
PORT 5
PORT 6
PORT 7
PORT 8
PORT 9
EXTAL
XTAL
CLOCK OSC
RES
STBY
MD$_0$
MD$_1$
MD$_2$
NMI
WAIT STATE CONTROLLER
RAM 1 k BYTE
MASK ROM 32 k BYTE
INTERRUPT CONTROLLER
DATA TRANSFER CONTROLLER
CPU
SERIAL COMMUNICATION INTERFACE
8-BIT TIMER
PWM TIMER (× 3 CHANNEL)
16-BIT FREE RUNNING TIMER (× 3 CHANNEL)
10-BIT A/D CONVERTER
WATCHDOG TIMER
DATA BUS (LOW ORDER)
DATA BUS (HIGH ORDER)
ADDRESS BUS

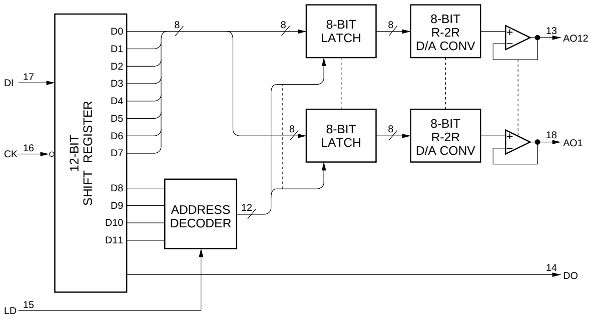
MB88346BPFV (FUJITSU)FLAT PACKAGE(SMALL)
MB88346BPFV-EF

C-MOS 8-BIT D/A CONVERTER
—TOP VIEW—


1 GND
GND 20
AO3 OUT 2
19 AO2 OUT
AO4 OUT 3
18 AO1 OUT
AO5 OUT 4
17 DI IN
AO6 OUT 5
16 CK IN
AO7 OUT 6
15 LD IN
AO8 OUT 7
14 DO OUT
AO9 OUT 8
13 AO12 OUT
AO10 OUT 9
12 AO11 OUT
10 VDD
VCC 11

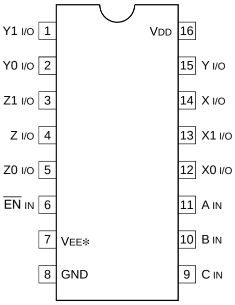

17 D1
16
LD 15
AO1 18
AO2 19
AO3 2
AO4 3
AO5 4
AO6 5
AO7 6
AO8 7
AO9 8
AO10 9
AO11 12
AO12 13
DO 14

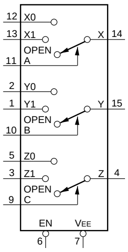
AO1 - AO12 : 8-BIT D/A OUTPUTS
CK : CLOCK INPUT
DI : SERIAL DATA INPUT
DO : DATA OUTPUT
LD : DATA LOAD CONTROL INPUT (H : LOAD)


DI 17
CK 16
LD 15
12-BIT SHIFT REGISTER
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
8
8
8-BIT LATCH
8
8-BIT R-2R D/A CONV
13 AO12
8
8-BIT LATCH
8
8-BIT R-2R D/A CONV
18 AO1
ADDRESS DECODER
12
14 DO

MC74HC4053DTR2 (MOTOROLA)FLAT PACKAGE
TC74HC4053AFT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
—TOP VIEW—


Y1 I/O 1
Y0 I/O 2
Z1 I/O 3
Z I/O 4
Z0 I/O 5
EN IN 6
7 VEE*
8 GND
VDD 16
15 Y I/O
14 X I/O
13 X1 I/O
12 X0 I/O
11 A IN
10 B IN
9 C IN


12 X0
13 X1
OPEN
11 A
X 14
2 Y0
1 Y1
OPEN
10 B
Y 15
5 Z0
3 Z1
OPEN
9 C
Z 4
EN
VEE
6
7

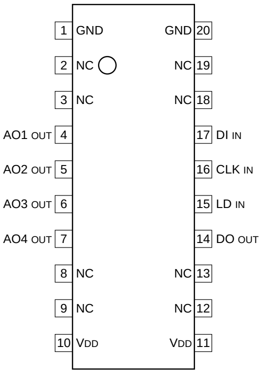
VEE* : VDD – VEE = +3 V to +12 V
VEE ≦ GND

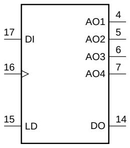
CONTROL INPUTS				ON CHANNEL		
EN	SELECT					
	C	B	A			
0	0	0	0	Z0	Y0	X0
0	0	0	1	Z0	Y0	X1
0	0	1	0	Z0	Y1	X0
0	0	1	1	Z0	Y1	X1
0	1	0	0	Z1	Y0	X0
0	1	0	1	Z1	Y0	X1
0	1	1	0	Z1	Y1	X0
0	1	1	1	Z1	Y1	X1
1	×	×	×	OPEN		

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

MB88351PFV (FUJITSU)FLAT PACKAGE
MB88351PFV-ER

C-MOS 12-BIT D/A CONVERTER WITH OPERATIONAL AMPLIFIER
—TOP VIEW—


1 GND
GND 20
2 NC
NC 19
3 NC
NC 18
AO1 OUT 4
17 DI IN
AO2 OUT 5
16 CLK IN
AO3 OUT 6
15 LD IN
AO4 OUT 7
14 DO OUT
8 NC
NC 13
9 NC
NC 12
10 VDD
VDD 11

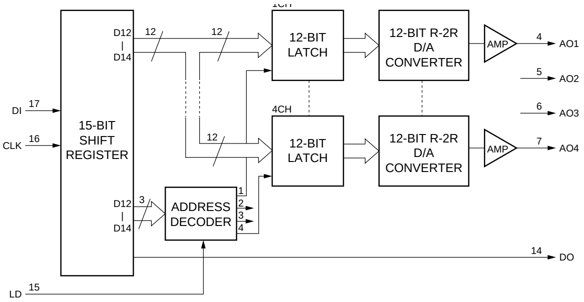

17 DI
16
15 LD
AO1 4
AO2 5
AO3 6
AO4 7
DO 14

INPUT
CLK : CHIFT CLOCK
DI : SERIAL DATA
LD : DECODER AND D/A REGISTER TO LOAD

OUTPUT
AO1 - AO4 : ANALOG DATA
DO : MBS BIT DATA IN 15-BIT SHIFT REGISTER

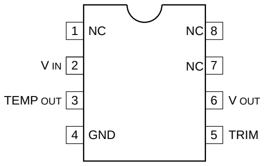
D12	D13	D14	ADDRESS SELECT
0	0	0	DON'T CARE
0	0	1	AO1 SELECT
0	1	0	AO2 SELECT
0	1	1	AO3 SELECT
1	0	0	AO4 SELECT
1	0	1	DON'T CARE
1	1	0	DON'T CARE
1	1	1	DON'T CARE

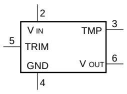
0 : LOW LEVEL
1 : HIGH LEVEL


DI 17
CLK 16
LD 15
15-BIT SHIFT REGISTER
D12 | D14
12
12
1CH
12-BIT LATCH
12-BIT R-2R D/A CONVERTER
AMP
4 AO1
5 AO2
6 AO3
4CH
12
12-BIT LATCH
12-BIT R-2R D/A CONVERTER
AMP
7 AO4
D12 | D14
3
ADDRESS DECODER
1
2
3
4
14 DO

REF-03GSR (PMI)FLAT PACKAGE

REFERENCE/TEMPERATURE TRANSDUCER
—TOP VIEW—


1 NC
V IN 2
TEMP OUT 3
4 GND
NC 8
NC 7
6 V OUT
5 TRIM

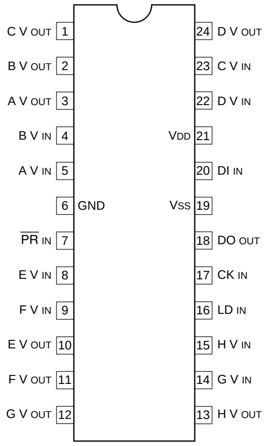

2
V IN
TMP 3
5 TRIM
GND
V OUT 6
4

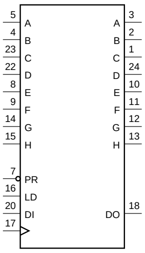
V IN : INPUT VOLTAGE (+4.5 V to +33 V)
TEMP OUT : TEMPERATURE TRANSDUCER VOLTAGE OUTPUT
TRIM IN : OUTPUT SIGNAL TRIMMING
V OUT : OUTPUT VOLTAGE (+2.5 V)

MP7670AS-TE2 (MICROPWR)FLAT PACKAGE

C-MOS 8-BIT 8CHANNEL D/A CONVERTER

—TOP VIEW—


1 C V OUT
2 B V OUT
3 A V OUT
4 B V IN
5 A V IN
6 GND
7 PR IN
8 E V IN
9 F V IN
10 E V OUT
11 F V OUT
12 G V OUT
13 H V OUT
14 G V IN
15 H V IN
16 LD IN
17 CK IN
18 DO OUT
19 VSS
20 DI IN
21 VDD
22 D V IN
23 C V IN
24 D V OUT


5 A
4 B
23 C
22 D
8 E
9 F
14 G
15 H
7 PR
16 LD
20 DI
17
A 3
B 2
C 1
D 24
E 10
F 11
G 12
H 13
DO 18

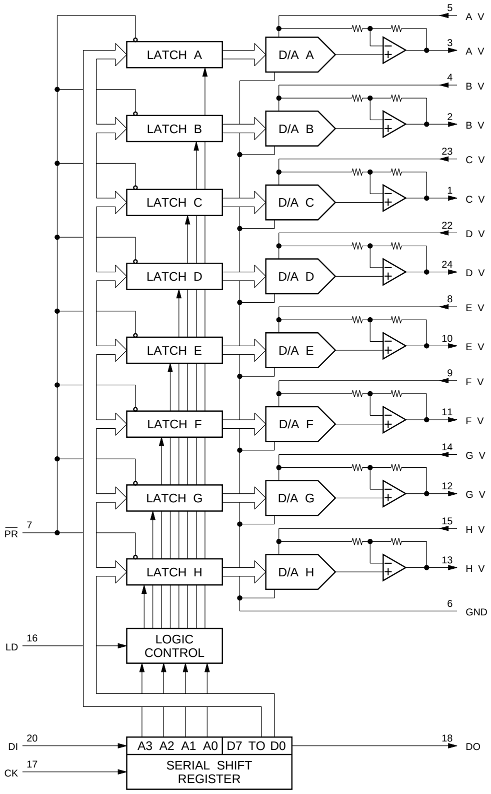
CK : CLOCK INPUT

DI : SERIAL DATA INPUT

DO : DATA OUTPUT

$\overline{\text{LD}}$: DATA LOAD CONTROL INPUT

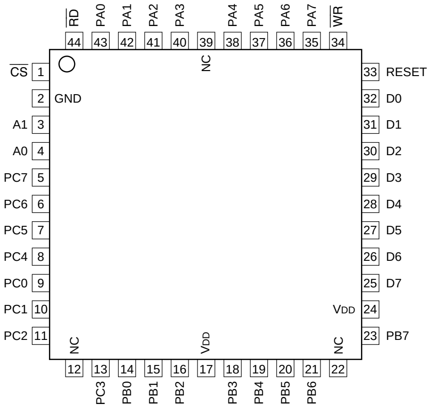
$\overline{\text{PR}}$: PRESET INPUT

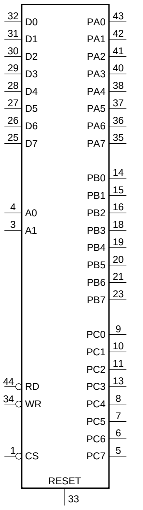

LATCH A
LATCH B
LATCH C
LATCH D
LATCH E
LATCH F
LATCH G
LATCH H
D/A A
D/A B
D/A C
D/A D
D/A E
D/A F
D/A G
D/A H
5 A V
3 A V
4 B V
2 B V
23 C V
1 C V
22 D V
24 D V
8 E V
10 E V
9 F V
11 F V
14 G V
12 G V
15 H V
13 H V
6 GND
7 PR
16 LD
LOGIC CONTROL
20 DI
17 CK
A3 A2 A1 A0 D7 TO D0
SERIAL SHIFT REGISTER
18 DO

MSM82C55A-2GS
MSM82C55A-2GS-VK (OKI)FLAT PACKAGE

C-MOS PROGRAMMABLE PERIPHERAL INTERFACE

—TOP VIEW—


44 RD
43 PA0
42 PA1
41 PA2
40 PA3
39 NC
38 PA4
37 PA5
36 PA6
35 PA7
34 WR
1 CS
2 GND
3 A1
4 A0
5 PC7
6 PC6
7 PC5
8 PC4
9 PC0
10 PC1
11 PC2
12 NC
13 PC3
14 PB0
15 PB1
16 PB2
17 VDD
18 PB3
19 PB4
20 PB5
21 PB6
22 NC
23 PB7
24 VDD
25 D7
26 D6
27 D5
28 D4
29 D3
30 D2
31 D1
32 D0
33 RESET


32 D0
31 D1
30 D2
29 D3
28 D4
27 D5
26 D6
25 D7
4 A0
3 A1
44 RD
34 WR
1 CS
RESET
33
PA0 43
PA1 42
PA2 41
PA3 40
PA4 38
PA5 37
PA6 36
PA7 35
PB0 14
PB1 15
PB2 16
PB3 18
PB4 19
PB5 20
PB6 21
PB7 23
PC0 9
PC1 10
PC2 11
PC3 13
PC4 8
PC5 7
PC6 6
PC7 5

A1	A0	$\overline{\text{CS}}$	$\overline{\text{WR}}$	$\overline{\text{RD}}$	OPERATION
0	0	0	1	0	PORT A → DATA BUS
0	1	0	1	0	PORT B → DATA BUS
1	0	0	1	0	PORT C → DATA BUS
1	1	0	1	0	NO OPERATION
0	0	0	0	1	DATA BUS → PORT A
0	1	0	0	1	DATA BUS → PORT B
1	0	0	0	1	DATA BUS → PORT C
1	1	0	0	1	DATA BUS → CONTROL REGISTER
×	×	1	×	×	HIGH IMPEDANCE

0 : LOW LEVEL

1 : HIGH LEVEL

× : DON'T CARE

A0, A1 : PORT SELECT ADDRESS

$\overline{\text{CS}}$: CHIP SELECT

D0 - 7 : DATA BUS

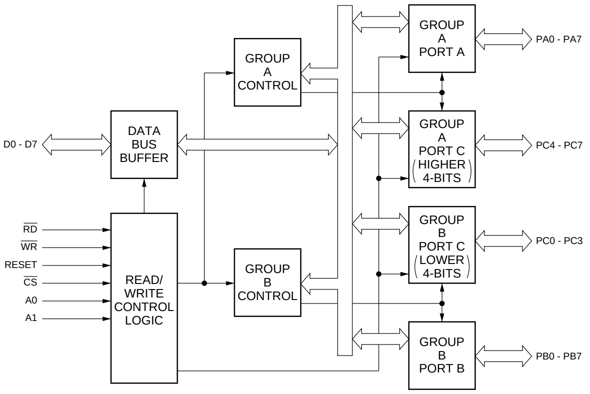
PA0 - 7 : PORT A IN/OUT

PB0 - 7 : PORT B IN/OUT

PC0 - 7 : PORT C IN/OUT

$\overline{\text{RD}}$: READ

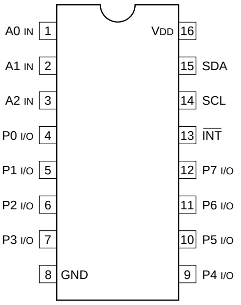
$\overline{\text{WR}}$: WRITE

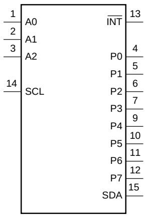

D0 - D7
DATA BUS BUFFER
RD
WR
RESET
CS
A0
A1
READ/ WRITE CONTROL LOGIC
GROUP A CONTROL
GROUP B CONTROL
GROUP A PORT A
GROUP A PORT C (HIGHER 4-BITS)
GROUP B PORT C (LOWER 4-BITS)
GROUP B PORT B
PA0 - PA7
PC4 - PC7
PC0 - PC3
PB0 - PB7

PCF8574T-T (PHILIPS)

C-MOS REMOTE 8-BIT I/O EXPANDER

—TOP VIEW—

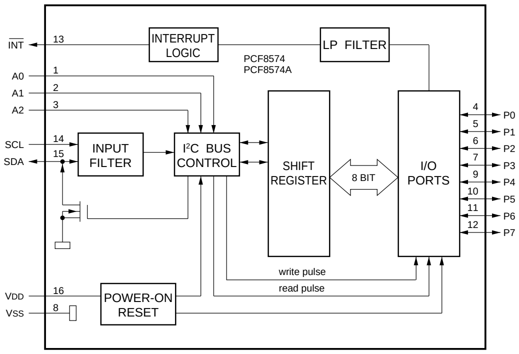

A0 IN 1
A1 IN 2
A2 IN 3
P0 I/O 4
P1 I/O 5
P2 I/O 6
P3 I/O 7
8 GND
VDD 16
15 SDA
14 SCL
13 $\overline{\text{INT}}$
12 P7 I/O
11 P6 I/O
10 P5 I/O
9 P4 I/O


1 A0
2 A1
3 A2
14 SCL
$\overline{\text{INT}}$ 13
P0 4
P1 5
P2 6
P3 7
P4 9
P5 10
P6 11
P7 12
SDA 15

INPUT
A0 - A2 : ADDRESS INPUTS
SCL : SYSTEM CLOCK LINE

OUTPUT
$\overline{\text{INT}}$: INTERRUPT OUTPUT
SDA : SERIAL DATA LINE

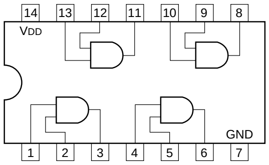
INPUT/OUTPUT
P0 - P7 : 8-BITS QUASI-BIDIRECTIONAL I/O PORT

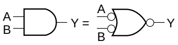

$\overline{\text{INT}}$
13
INTERRUPT LOGIC
LP FILTER
PCF8574
PCF8574A
A0
A1
A2
1
2
3
SCL
SDA
14
15
INPUT FILTER
I²C BUS CONTROL
SHIFT REGISTER
8 BIT
I/O PORTS
4 P0
5 P1
6 P2
7 P3
9 P4
10 P5
11 P6
12 P7
write pulse
read pulse
VDD
VSS
16
8
POWER-ON RESET

SN74HC08ANS (TI)FLAT PACKAGE
SN74HC08ANS-E05
SN74HC08APW-E05 (TI)FLAT PACKAGE
SN74HCT08APW-E05
SN74HCT08APW-E20 (TI)FLAT PACKAGE
TC74VHC08FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS QUAD 2-INPUT AND GATES

—TOP VIEW—


14
13
12
11
10
9
8
VDD
GND
1
2
3
4
5
6
7



Y = A • B = $\overline{\overline{A} + \overline{B}}$

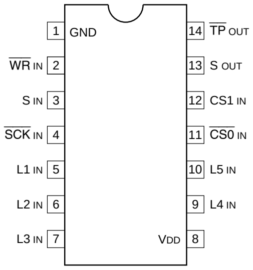
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

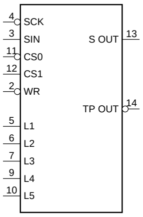
0 : LOW LEVEL
1 : HIGH LEVEL

RTC-4553B (EPSON)

C-MOS REAL TIME CLOCK

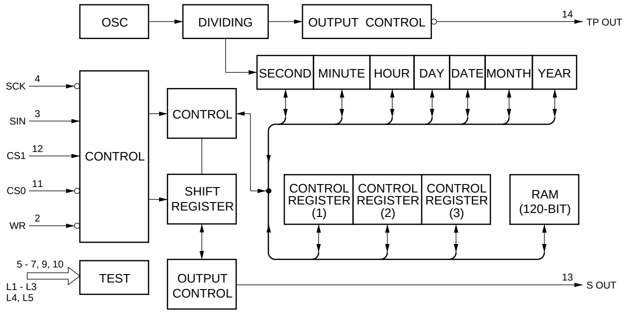
—TOP VIEW—


1 GND
$\overline{\text{WR}}$ IN 2
S IN 3
$\overline{\text{SCK}}$ IN 4
L1 IN 5
L2 IN 6
L3 IN 7
14 $\overline{\text{TP}}$ OUT
13 S OUT
12 CS1 IN
11 $\overline{\text{CS0}}$ IN
10 L5 IN
9 L4 IN
VDD 8


4 SCK
3 SIN
11 CS0
12 CS1
2 WR
5 L1
6 L2
7 L3
9 L4
10 L5
S OUT 13
TP OUT 14

INPUT
$\overline{\text{CS0}}$: CHIP SELECT (L : ACCESS ENABLE, H : SOUT HIGH Z)
CS1 : POWER DOWN DETECTION
$\overline{\text{L1 - L5}}$: TEST IN
$\overline{\text{SCK}}$: SERIAL SYNC SIGNAL
SIN : SERIAL ADDRESS/DATA
$\overline{\text{WR}}$: WRITING SELECT (L : WRITING, H : READING)

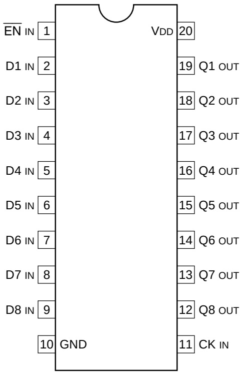
OUTPUT
SOUT : SERIAL ADDRESS/DATA
$\overline{\text{TPOUT}}$: REFERENCE SIGNAL

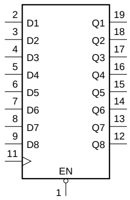

OSC
DIVIDING
OUTPUT CONTROL
14 TP OUT
SECOND
MINUTE
HOUR
DAY
DATE
MONTH
YEAR
SCK 4
SIN 3
CS1 12
CS0 11
WR 2
CONTROL
CONTROL
SHIFT REGISTER
CONTROL REGISTER (1)
CONTROL REGISTER (2)
CONTROL REGISTER (3)
RAM (120-BIT)
5 - 7, 9, 10
L1 - L3
L4, L5
TEST
OUTPUT CONTROL
13 S OUT

SN74HC574APW-E05
SN74HC574APW-E20 (TI)

C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP

—TOP VIEW—

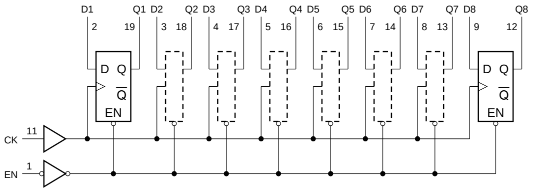

$\overline{\text{EN}}$ IN 1
D1 IN 2
D2 IN 3
D3 IN 4
D4 IN 5
D5 IN 6
D6 IN 7
D7 IN 8
D8 IN 9
10 GND
VDD 20
19 Q1 OUT
18 Q2 OUT
17 Q3 OUT
16 Q4 OUT
15 Q5 OUT
14 Q6 OUT
13 Q7 OUT
12 Q8 OUT
11 CK IN


2 D1
3 D2
4 D3
5 D4
6 D5
7 D6
8 D7
9 D8
11
Q1 19
Q2 18
Q3 17
Q4 16
Q5 15
Q6 14
Q7 13
Q8 12
EN
1

EACH FLIP-FLOP

INPUTS			OUT
EN	CK	D	Q
0	↑	1	1
0	↑	0	0
0	↓	×	Q0
1	×	×	HI-Z

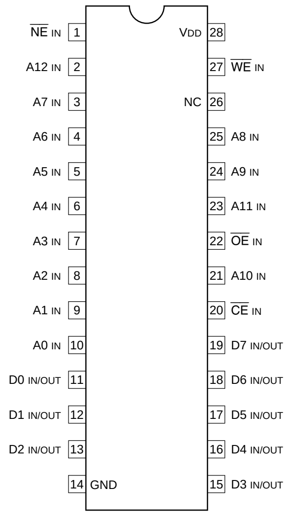
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE
Q0 : NONSTABLE

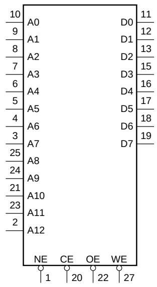

D1 2
Q1 19
D2 3
Q2 18
D3 4
Q3 17
D4 5
Q4 16
D5 6
Q5 15
D6 7
Q6 14
D7 8
Q7 13
D8 9
Q8 12
D
Q
$\overline{\text{Q}}$
EN
CK 11
EN 1

STK10C68-S35 (SIMTEK)FLAT PACKAGE

C-MOS 8 K × 8-BIT NONVOLATILE SRAM

—TOP VIEW—


$\overline{NE}$ IN 1
A12 IN 2
A7 IN 3
A6 IN 4
A5 IN 5
A4 IN 6
A3 IN 7
A2 IN 8
A1 IN 9
A0 IN 10
D0 IN/OUT 11
D1 IN/OUT 12
D2 IN/OUT 13
14 GND
VDD 28
27 $\overline{WE}$ IN
NC 26
25 A8 IN
24 A9 IN
23 A11 IN
22 $\overline{OE}$ IN
21 A10 IN
20 $\overline{CE}$ IN
19 D7 IN/OUT
18 D6 IN/OUT
17 D5 IN/OUT
16 D4 IN/OUT
15 D3 IN/OUT


10 A0
9 A1
8 A2
7 A3
6 A4
5 A5
4 A6
3 A7
25 A8
24 A9
21 A10
23 A11
2 A12
D0 11
D1 12
D2 13
D3 15
D4 16
D5 17
D6 18
D7 19
NE CE OE WE
1 20 22 27

INPUT

A0 - A12 : ADDRESS

$\overline{CE}$: CHIP ENABLE

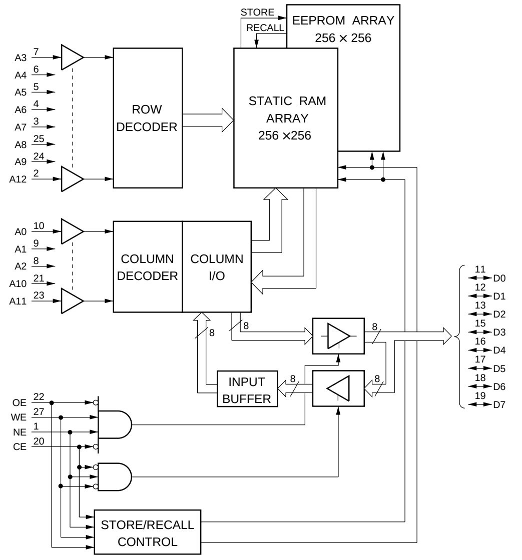
$\overline{NE}$: NONVOLATILE ENABLE

$\overline{OE}$: OUTPUT ENABLE

$\overline{WE}$: WRITE ENABLE

INPUT/OUTPUT

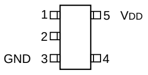
D0 - D7 : DATA

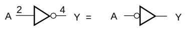

STORE
RECALL
EEPROM ARRAY
256 × 256
A3 7
A4 6
A5 5
A6 4
A7 3
A8 25
A9 24
A12 2
ROW DECODER
STATIC RAM ARRAY
256 ×256
A0 10
A1 9
A2 8
A10 21
A11 23
COLUMN DECODER
COLUMN I/O
8
8
8
8
8
INPUT BUFFER
11 D0
12 D1
13 D2
15 D3
16 D4
17 D5
18 D6
19 D7
OE 22
WE 27
NE 1
CE 20
STORE/RECALL CONTROL

TC4S69F (TOSHIBA)CHIP PACKAGE
TC4S69F(TE85R)
TC7S04FU(TE85R) (TOSHIBA)FLAT PACKAGE
TC7SH04FU (TOSHIBA)CHIP PACKAGE
TC7SH04FU-TE85R

C-MOS INVERTER

—TOP VIEW—


1
2
GND 3
5 VDD
4



$Y = \overline{A}$

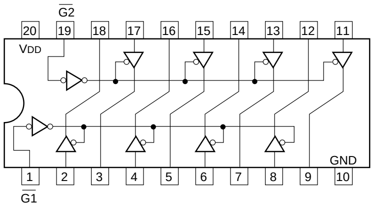
A	Y
0	1
1	0

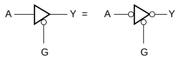
0 : LOW LEVEL
1 : HIGH LEVEL

SN74HCT244APW-E05 (TI)FLAT PACKAGE
TC74VHC244FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS BUS BUFFER WITH 3-STATE OUTPUTS

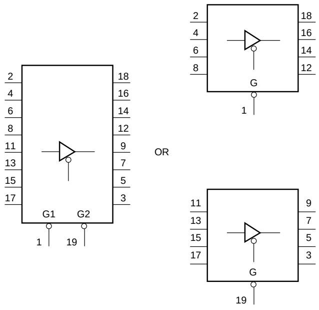
—TOP VIEW—


$\overline{G2}$
20 19 18 17 16 15 14 13 12 11
VDD
GND
1 2 3 4 5 6 7 8 9 10
$\overline{G1}$



G	A	Y
0	0	0
0	1	1
×	×	HI-Z

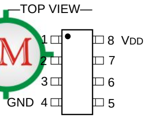
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

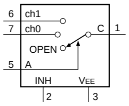

2
4
6
8
11
13
15
17
18
16
14
12
9
7
5
3
G1 G2
1 19
OR
2 18
4 16
6 14
8 12
G
1
11 9
13 7
15 5
17 3
G
19

TC4W53FU (TOSHIBA)CHIP PACKAGE
TC4W53FU(TE12R)

C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER

—TOP VIEW—


1
2
3
GND 4
8 VDD
7
6
5


6 ch1
7 ch0
C 1
OPEN
5 A
INH
VEE
2
3

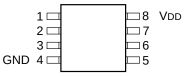
CONT. INPUT		ON CHANNEL
INH	A	
0	0	ch0
0	1	ch1
1	×	OPEN

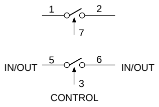
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

TC4W66FU(TE12R) (TOSHIBA)FLAT PACKAGE

C-MOS DUAL BILATERAL SWITCH

—TOP VIEW—


1
2
3
GND 4
8 VDD
7
6
5


1
2
7
IN/OUT 5
6 IN/OUT
3
CONTROL

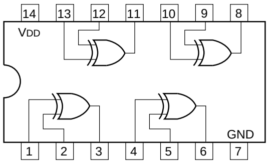
CONTROL	SWITCH
0	OFF
1	ON

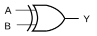
0 : LOW LEVEL
1 : HIGH LEVEL

TC74AC86F (TOSHIBA)FLAT PACKAGE

C-MOS QUAD EXCLUSIVE OR GATES

—TOP VIEW—


14 13 12 11 10 9 8
VDD
GND
1 2 3 4 5 6 7



$Y = \overline{A} \cdot B + A \cdot \overline{B}$

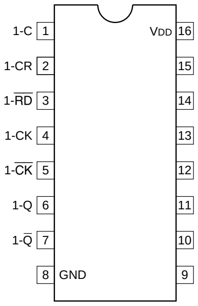
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

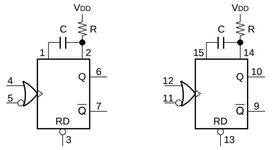
0 : LOW LEVEL
1 : HIGH LEVEL

TC74HC4538AFT (TOSHIBA)FLAT PACKAGE
TC74HC4538AFT(EL)

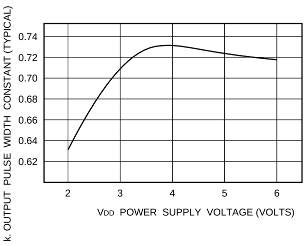
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR

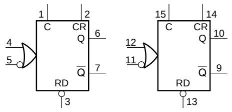
—TOP VIEW—


1-C 1
1-CR 2
1-RD 3
1-CK 4
1-CK 5
1-Q 6
1-Q 7
8 GND
VDD 16
15 2-C
14 2-CR
13 2-RD
12 2-CK
11 2-CK
10 2-Q
9 2-Q

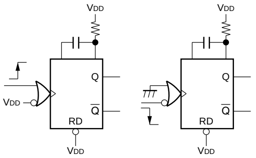

VDD
C
R
1
2
4
5
6
7
Q
Q
RD
3
15
14
12
11
10
9
13

OUTPUT PULSE WIDTH = k • C • R

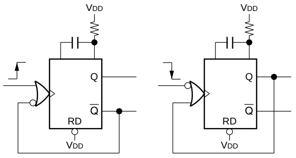



1
2
C
CR
Q
Q
RD
4
5
6
7
3
15
14
12
11
10
9
13

RETRIGGERABLE M. M. V



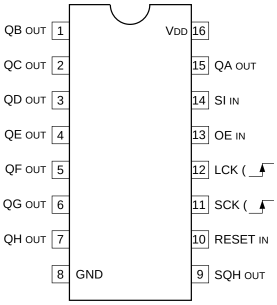
NON-RETRIGGERABLE M. M. V

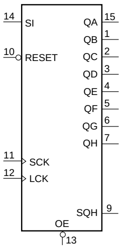


TC74HC595AF(EL) (TOSHIBA)FLAT PACKAGE

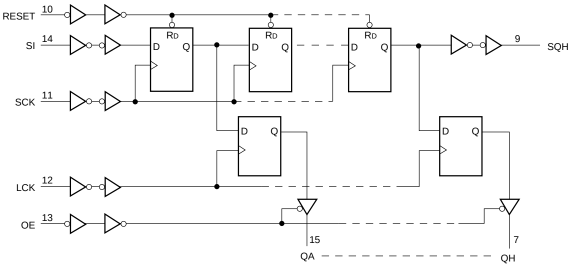
C-MOS 8-BIT SERIAL-INPUT/SERIAL- OR PARALLEL-OUTPUT SHIFT REGISTER WITH LATCHED 3-STATE OUTPUT

—TOP VIEW—


QB OUT 1
QC OUT 2
QD OUT 3
QE OUT 4
QF OUT 5
QG OUT 6
QH OUT 7
8 GND
VDD 16
15 QA OUT
14 SI IN
13 OE IN
12 LCK ( ) IN
11 SCK ( ) IN
10 RESET IN
9 SQH OUT


14
SI
10
RESET
11
SCK
12
LCK
OE
13
QA 15
QB 1
QC 2
QD 3
QE 4
QF 5
QG 6
QH 7
SQH 9

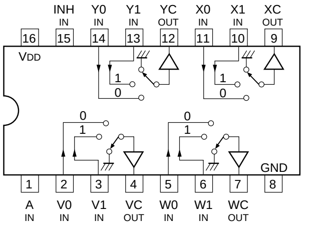
OE	:	OUTPUT ENABLE INPUT
LCK	:	LATCH CLOCK INPUT
SCK	:	SHIFT CLOCK INPUT
RESET	:	SHIFT-REGISTER RESET INPUT
SI	:	SERIAL N
QA - QH	:	PARALLEL OUTPUT
SQH	:	SERIAL OUT

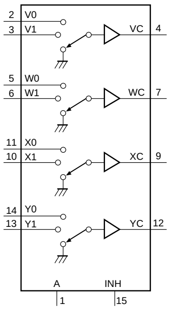

RESET 10
SI 14
SCK 11
LCK 12
OE 13
RD
D
Q
9
SQH
15
QA
7
QH

TC74VHC157FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS QUAD 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER

—TOP VIEW—


INH IN
Y0 IN
Y1 IN
YC OUT
X0 IN
X1 IN
XC OUT
16
15
14
13
12
11
10
9
VDD
1
0
GND
1
2
3
4
5
6
7
8
A IN
V0 IN
V1 IN
VC OUT
W0 IN
W1 IN
WC OUT


2 V0
3 V1
VC 4
5 W0
6 W1
WC 7
11 X0
10 X1
XC 9
14 Y0
13 Y1
YC 12
A
INH
1
15

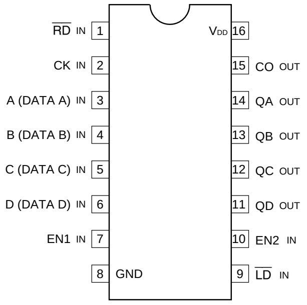
CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	×	GND

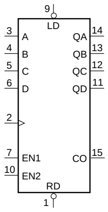
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

TC74VHC163FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER

—TOP VIEW—


RD IN 1
CK IN 2
A (DATA A) IN 3
B (DATA B) IN 4
C (DATA C) IN 5
D (DATA D) IN 6
EN1 IN 7
8 GND
VDD 16
15 CO OUT
14 QA OUT
13 QB OUT
12 QC OUT
11 QD OUT
10 EN2 IN
9 LD IN


9
LD
3 A
4 B
5 C
6 D
2
7 EN1
10 EN2
RD
1
QA 14
QB 13
QC 12
QD 11
CO 15

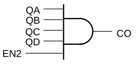
MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	×	×	×	RESET (SYNCHRONOUS)
1	0	×	×	PRESET (SYNCHRONOUS)
1	1	0	×	NO COUNT
1	1	×	0	NO COUNT
1	1	1	1	COUNT

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

CARRY OUTPUT "CO"

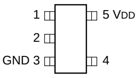

QA
QB
QC
QD
EN2
CO

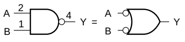
CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

TC7S00FU(TE85R) (TOSHIBA)CHIP PACKAGE
TC7SH00FU-TE85R (TOSHIBA)FLAT PACKAGE

C-MOS 2-INPUT NAND GATE

—TOP VIEW—


1
2
GND 3
5 VDD
4



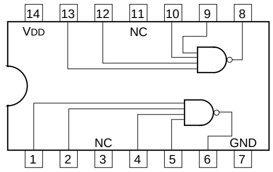
$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

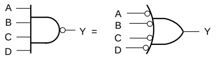
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC74VHC20F(EL) (TOSHIBA)FLAT PACKAGE
TC74VHC20FT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS 4-INPUT POSITIVE-NAND GATE
—TOP VIEW—


14
13
12
11
10
9
8
VDD
NC
NC
GND
1
2
3
4
5
6
7


A
B
C
D
Y =
A
B
C
D
Y

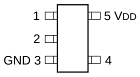
$Y = \overline{A \cdot B \cdot C \cdot D} = \overline{A} + \overline{B} + \overline{C} + \overline{D}$

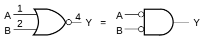
A	B	C	D	Y
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
⋮	⋮	⋮	⋮	⋮
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC7S02FU(TE85R)
TC7S02FU-TE85L (TOSHIBA)CHIP PACKAGE
TC7SH02FU (TOSHIBA)CHIP PACKAGE
TC7SH02FU-TE85R

C-MOS 2-INPUT NOR GATE
—TOP VIEW—


1
2
GND 3
5 VDD
4



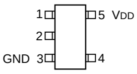
$Y = \overline{A + B} = \overline{A} \cdot \overline{B}$

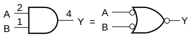
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC7S08FU(TE85R) (TOSHIBA)FLAT PACKAGE
TC7SH08FU-TE85R (TOSHIBA)CHIP PACKAGE

C-MOS 2-INPUT AND GATE
—TOP VIEW—


1
2
GND 3
5 VDD
4



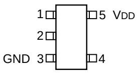
$Y = A \cdot B = \overline{\overline{A} + \overline{B}}$

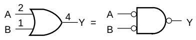
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

TC7S32FU(TE85R) (TOSHIBA)FLAT PACKAGE
TC7SH32FU-TE85R (TOSHIBA)FLAT PACKAGE

C-MOS 2-INPUT OR GATE
—TOP VIEW—


1
2
GND 3
5 VDD
4



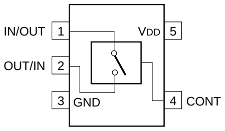
$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

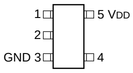
TC7S66FU (TOSHIBA)
TC7S66FU(TE85R)

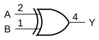
C-MOS ANALOG SWITCH
—TOP VIEW—


IN/OUT 1
OUT/IN 2
3 GND
VDD 5
4 CONT

TC7S86FU (TOSHIBA)CHIP PACKAGE
TC7S86FU(TE85R)

C-MOS 2-INPUT EXCLUSIVE OR GATE
—TOP VIEW—


1
2
GND 3
5 VDD
4



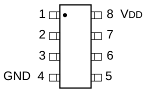
$Y = \overline{A} \cdot B + A \cdot \overline{B}$

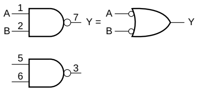
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC7W00FU (TOSHIBA)CHIP PACKAGE
TC7W00FU(TE12R)

C-MOS DUAL 2-INPUT NAND GATE
—TOP VIEW—


1
2
3
GND 4
8 VDD
7
6
5


A
B
1
2
7
Y =
A
B
Y
5
6
3

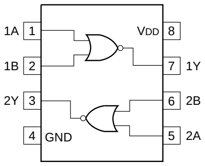
$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

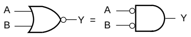
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC7W02F (TOSHIBA)FLAT PACKAGE
TC7W02FU(TE12R)

C-MOS DUAL 2-INPUT NOR GATE
—TOP VIEW—


1A 1
1B 2
2Y 3
4 GND
VDD 8
7 1Y
6 2B
5 2A



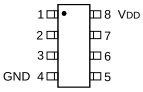
$Y = \overline{A + B} = \overline{A} \cdot \overline{B}$

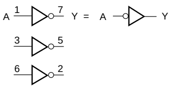
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC7W04FU(TE12R) (TOSHIBA)FLAT PACKAGE

C-MOS HEX INVERTERS
—TOP VIEW—


1
2
3
GND 4
8 VDD
7
6
5


A
1
7
Y =
A
Y
3
5
6
2

$Y = \overline{A}$

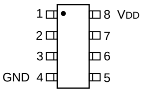
A	Y
0	1
1	0

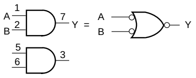
0 : LOW LEVEL
1 : HIGH LEVEL

TC7W08FU (TOSHIBA)CHIP PACKAGE
TC7W08FU(TE12R)

C-MOS 2-INPUT AND GATE

—TOP VIEW—


1
2
3
GND 4
8 VDD
7
6
5


A
B
1
2
7
Y =
A
B
Y
5
6
3

$Y = A \cdot B = \overline{\overline{A} + \overline{B}}$

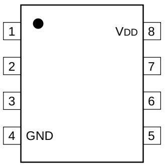
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

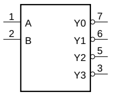
0 : LOW LEVEL
1 : HIGH LEVEL

TC7W139FU(TE12R) (TOSHIBA)CHIP PACKAGE

C-MOS 2 to 4 LINE DECODER WITH ENABLE

—TOP VIEW—


1
2
3
4 GND
VDD 8
7
6
5


1
2
A
B
Y0
Y1
Y2
Y3
7
6
5
3

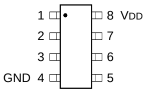
INPUTS		OUTPUTS				SELECTED OUTPUT
SELECT						
B	A	$\overline{Y0}$	$\overline{Y1}$	$\overline{Y2}$	$\overline{Y3}$	
0	0	0	1	1	1	$\overline{Y0}$
0	1	1	0	1	1	$\overline{Y1}$
1	0	1	1	0	1	$\overline{Y2}$
1	1	1	1	1	0	$\overline{Y3}$

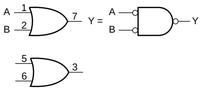
0 : LOW LEVEL
1 : HIGH LEVEL

TC7W32FU-TE12L (TOSHIBA)CHIP PACKAGE

C-MOS DUAL 2-INPUT OR GATE

—TOP VIEW—


1
2
3
GND 4
8 VDD
7
6
5


A
B
1
2
7
Y =
A
B
Y
5
6
3

$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

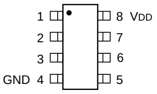
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

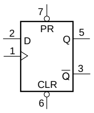
0 : LOW LEVEL
1 : HIGH LEVEL

TC7W74FU (TOSHIBA)CHIP PACKAGE
TC7W74FU(TE12R)

C-MOS D-TYPE FLIP-FLOPS WITH PRESET AND CLEAR

—TOP VIEW—


1
2
3
GND 4
8 VDD
7
6
5


7
PR
2
D
Q
5
1
3
Q̅
CLR
6

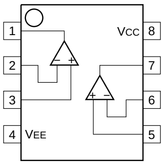
INPUTS				OUTPUTS		FUNCTION
$\overline{CLR}$	$\overline{PR}$	CK	D	Qn+1	$\overline{Qn+1}$	
0	1	×	×	0	1	CLEAR
1	0	×	×	1	0	PRESET
0	0	×	×	1	1	–
1	1	↑	0	0	1	–
1	1	↑	1	1	0	–
1	1	↓	×	Qn	$\overline{Qn}$	NO CHANGE

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

TL062CPW (TI)FLAT PACKAGE
TL062CPW-E05
TL082CPS-E05
TL082M (TI)FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIERS
(DUAL-SUPPLY TYPE)

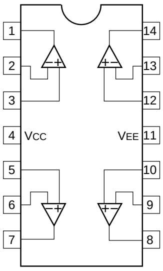
—TOP VIEW—


1
2
3
4 VEE
VCC 8
7
6
5

TL064CNS (TI)FLAT PACKAGE
TL064CNS-E05
TL064CPW (TI)FLAT PACKAGE
TL064CPW-E05

OPERATIONAL AMPLIFIER
(J FET INPUT)

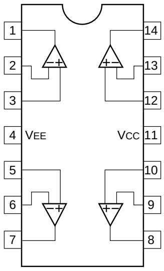
—TOP VIEW—


1
2
3
4 VCC
5
6
7
14
13
12
VEE 11
10
9
8

TL074CPW (TI)FLAT PACKAGE
TL074CPW-E05

OPERATIONAL AMPLIFIER
(LOW-NOISE, JFET-INPUT)

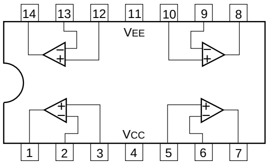
—TOP VIEW—


1
2
3
4 VEE
5
6
7
14
13
12
VCC 11
10
9
8

TL084CPW-E05
TL084CPW-E20 (TI)FLAT PACKAGE

OPERATIONAL AMPLIFIER
(J FET INPUT)

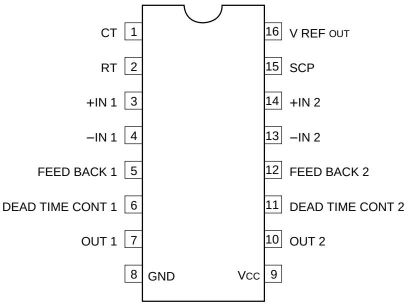
—TOP VIEW—

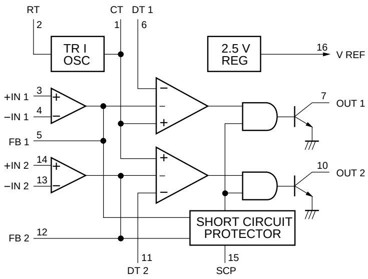

14
13
12
11
10
9
8
VEE
VCC
1
2
3
4
5
6
7

TL1451ACPW-E05 (TI)

DUAL PWM POWER CONTROLLER

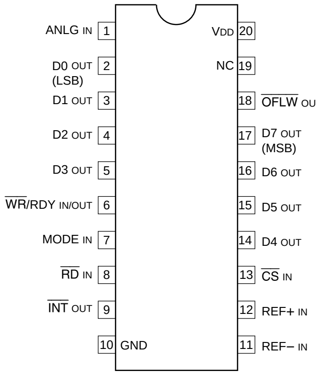
—TOP VIEW—

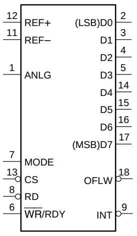

CT 1
RT 2
+IN 1 3
−IN 1 4
FEED BACK 1 5
DEAD TIME CONT 1 6
OUT 1 7
8 GND
16 V REF OUT
15 SCP
14 +IN 2
13 −IN 2
12 FEED BACK 2
11 DEAD TIME CONT 2
10 OUT 2
VCC 9


RT 2
CT 1
DT 1 6
TR I OSC
2.5 V REG
16 V REF
+IN 1 3
−IN 1 4
FB 1 5
+IN 2 14
−IN 2 13
FB 2 12
7 OUT 1
10 OUT 2
SHORT CIRCUIT PROTECTOR
11 DT 2
15 SCP

TLC0820ACDW (TI)FLAT PACKAGE
TLC0820ACDWR

C-MOS 8-BIT SEMIFLASH TYPE A/D CONVERTER


ANLG IN 1
D0 OUT (LSB) 2
D1 OUT 3
D2 OUT 4
D3 OUT 5
WR/RDY IN/OUT 6
MODE IN 7
RD IN 8
INT OUT 9
10 GND
VDD 20
NC 19
18 OFLW OUT
17 D7 OUT (MSB)
16 D6 OUT
15 D5 OUT
14 D4 OUT
13 CS IN
12 REF+ IN
11 REF− IN


12 REF+
11 REF−
1 ANLG
7 MODE
13 CS
8 RD
6 WR/RDY
(LSB)D0 2
D1 3
D2 4
D3 5
D4 14
D5 15
D6 16
(MSB)D7 17
OFLW 18
INT 9

INPUT

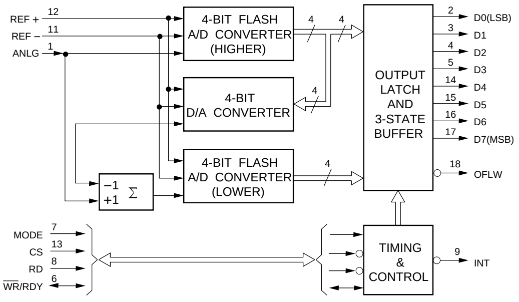
ANLG : ANALOG SIGNAL
$\overline{\text{CS}}$: CHIP SELECT
MODE : MODE
$\overline{\text{RD}}$: READ
REF+, REF− : REFERENCE VOLTAGE +, −

OUTPUT

D0 - D7 : DIGITAL SIGNAL
$\overline{\text{INT}}$: INTERRUPT
$\overline{\text{OFLW}}$: OVERFLOW

INPUT/OUTPUT

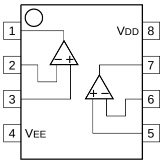
$\overline{\text{WR}}$/RDY : L : WRITE/H : READY


REF + 12
REF − 11
ANLG 1
4-BIT FLASH A/D CONVERTER (HIGHER)
4-BIT D/A CONVERTER
4-BIT FLASH A/D CONVERTER (LOWER)
−1 +1 Σ
4
4
4
4
OUTPUT LATCH AND 3-STATE BUFFER
2 D0(LSB)
3 D1
4 D2
5 D3
14 D4
15 D5
16 D6
17 D7(MSB)
18 OFLW
TIMING & CONTROL
9 INT
MODE 7
CS 13
RD 8
WR/RDY 6

TLC272CPS (TI)FLAT PACKAGE
TLC272CPS-E05
TLC27L2CPS (TI)FLAT PACKAGE
TLC27L2CPS-E05
TLC372CPS (TI)FLAT PACKAGE
TLC372CPS-E05

C-MOS DUAL OPERATIONAL AMPLIFIERS (SINGLE-SUPPLY TYPE)

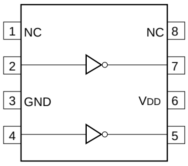
—TOP VIEW—


1
2
3
4 VEE
VDD 8
7
6
5

TSC426C0A (TELEDYNE)FLAT PACKAGE
TSC426C0A-T2

C-MOS HIGH SPEED DUAL DRIVER

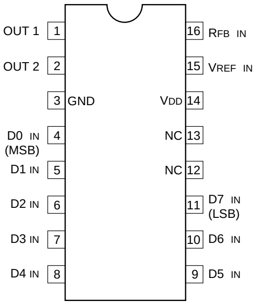
—TOP VIEW—

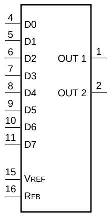

1 NC
2
3 GND
4
NC 8
7
VDD 6
5

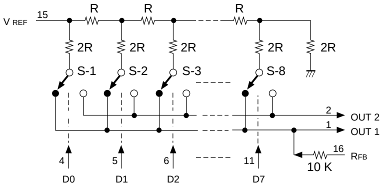
XRD7523AID-JTR (EXAR)FLAT PACKAGE
XRD7523AIK-JTR

C-MOS 8-BIT D/A CONVERTER

—TOP VIEW—


OUT 1 1
OUT 2 2
3 GND
D0 IN (MSB) 4
D1 IN 5
D2 IN 6
D3 IN 7
D4 IN 8
16 RFB IN
15 VREF IN
VDD 14
NC 13
NC 12
11 D7 IN (LSB)
10 D6 IN
9 D5 IN


4 D0
5 D1
6 D2
7 D3
8 D4
9 D5
10 D6
11 D7
15 VREF
16 RFB
OUT 1 1
OUT 2 2


V REF 15
R
R
R
2R
2R
2R
2R
2R
S-1
S-2
S-3
S-8
2 OUT 2
1 OUT 1
16 RFB
10 K
4 D0
5 D1
6 D2
11 D7

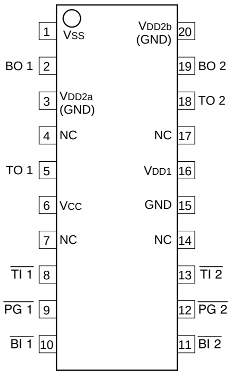
MP7523 : R = 10 K
XRD7523 : R = 20 K

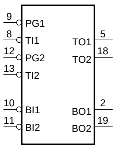
http://getMANUAL.com

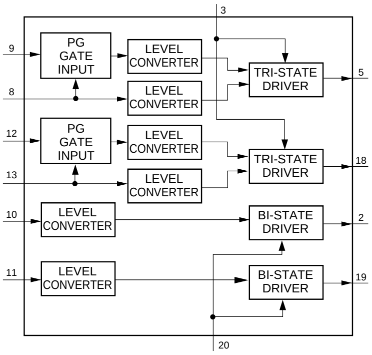
UPD16502GS(1) (NEC)FLAT PACKAGE
UPD16502GS(1)-E2

C-MOS CCD DRIVER

—TOP VIEW—


1 VSS
2 BO 1
3 VDD2a (GND)
4 NC
5 TO 1
6 VCC
7 NC
8 TI 1
9 PG 1
10 BI 1
11 BI 2
12 PG 2
13 TI 2
14 NC
15 GND
16 VDD1
17 NC
18 TO 2
19 BO 2
20 VDD2b (GND)

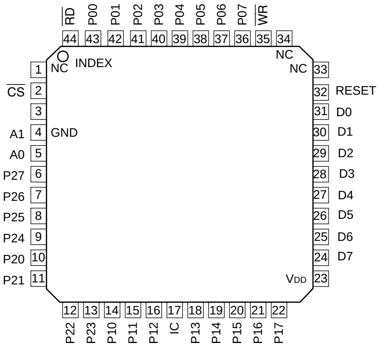

9 PG1
8 TI1
12 PG2
13 TI2
10 BI1
11 BI2
TO1 5
TO2 18
BO1 2
BO2 19

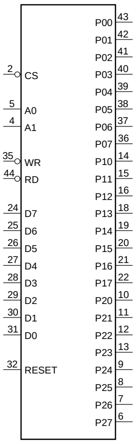

3
9
PG GATE INPUT
LEVEL CONVERTER
TRI-STATE DRIVER
5
8
LEVEL CONVERTER
12
PG GATE INPUT
LEVEL CONVERTER
TRI-STATE DRIVER
18
13
LEVEL CONVERTER
10
LEVEL CONVERTER
BI-STATE DRIVER
2
11
LEVEL CONVERTER
BI-STATE DRIVER
19
20

UPD71055GB-10-3B4 (NEC)

C-MOS PARALLEL INTERFACE UNIT

—TOP VIEW—


1 NC INDEX
CS 2
3
A1 4 GND
A0 5
P27 6
P26 7
P25 8
P24 9
P20 10
P21 11
12 P22
13 P23
14 P10
15 P11
16 P12
17 IC
18 P13
19 P14
20 P15
21 P16
22 P17
23 VDD
24 D7
25 D6
26 D5
27 D4
28 D3
29 D2
30 D1
31 D0
32 RESET
33 NC
34 NC
35 WR
36 P07
37 P06
38 P05
39 P04
40 P03
41 P02
42 P01
43 P00
44 RD

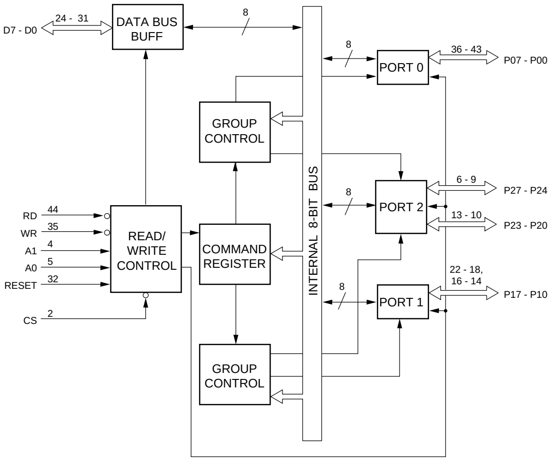

2 CS
5 A0
4 A1
35 WR
44 RD
24 D7
25 D6
26 D5
27 D4
28 D3
29 D2
30 D1
31 D0
32 RESET
P00 43
P01 42
P02 41
P03 40
P04 39
P05 38
P06 37
P07 36
P10 14
P11 15
P12 16
P13 18
P14 19
P15 20
P16 21
P17 22
P20 10
P21 11
P22 12
P23 13
P24 9
P25 8
P26 7
P27 6

A1, A0 ; ADDRESS
CS ; CHIP SELECT
D7 - D0 ; DATA BUS
P07 - P00 ; PORT 0
P17 - P10 ; PORT 1
P27 - P20 ; PORT 2
RD ; READ STROBE
WR ; WRITE STROBE

IC ; INTERNALLY CONNECTED

CS	RD	WR	A1	A0	OPERATION	CPU ACTION
0	0	1	0	0	PORT0 → DATA • BUS	INPUT
0	0	1	0	1	PORT1 → DATA • BUS	INPUT
0	0	1	1	0	PORT2 → DATA • BUS	INPUT
0	0	1	1	1	DISABLE	
0	0	0	×	×		
0	1	0	0	0	DATA • BUS → PORT0	OUTPUT
0	1	0	0	1	DATA • BUS → PORT1	OUTPUT
0	1	0	1	0	DATA • BUS → PORT2	OUTPUT
0	1	0	1	1	DATA • BUS → COMMAND REGISTER	OUTPUT
0	1	1	×	×	HIGH IMPEDANCE	
1	×	×	×	×		

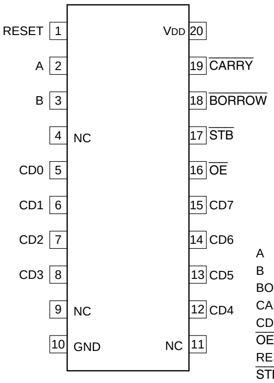
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

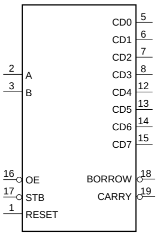

D7 - D0
24 - 31
DATA BUS BUFF
8
8
PORT 0
36 - 43
P07 - P00
GROUP CONTROL
INTERNAL 8-BIT BUS
8
PORT 2
6 - 9
P27 - P24
13 - 10
P23 - P20
RD 44
WR 35
A1 4
A0 5
RESET 32
CS 2
READ/ WRITE CONTROL
COMMAND REGISTER
8
PORT 1
22 - 18, 16 - 14
P17 - P10
GROUP CONTROL

UPD4702G (NEC)

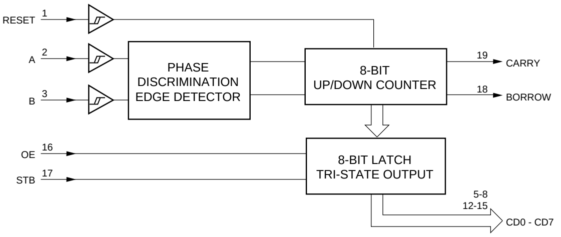
C-MOS INCREMENTAL ENCODER 8-BIT UPDOWN COUNTER

—TOP VIEW—


RESET 1
A 2
B 3
4 NC
CD0 5
CD1 6
CD2 7
CD3 8
9 NC
10 GND
NC 11
12 CD4
13 CD5
14 CD6
15 CD7
16 OE
17 STB
18 BORROW
19 CARRY
VDD 20


2 A
3 B
16 OE
17 STB
1 RESET
CD0 5
CD1 6
CD2 7
CD3 8
CD4 12
CD5 13
CD6 14
CD7 15
BORROW 18
CARRY 19

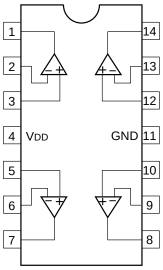
A : INCREMENTAL SIGNAL (PHASE A) INPUT
B : INCREMENTAL SIGNAL (PHASE B) INPUT
BORROW : BORROW PULSE OUTPUT
CARRY : CARRY PULSE OUTPUT
CD0 - 7 : COUNT DATA OUTPUT
OE : OUTPUT CONTROL SIGNAL INPUT
RESET : COUNTER RESET INPUT
STB : LATCH STROBE SIGNAL INPUT


RESET 1
A 2
B 3
PHASE DISCRIMINATION EDGE DETECTOR
8-BIT UP/DOWN COUNTER
19 CARRY
18 BORROW
OE 16
STB 17
8-BIT LATCH TRI-STATE OUTPUT
5-8 12-15
CD0 - CD7

TLC274CNS (TI)FLAT PACKAGE
TLC274CNS-E05

C-MOS OPERATIONAL AMPLIFIER

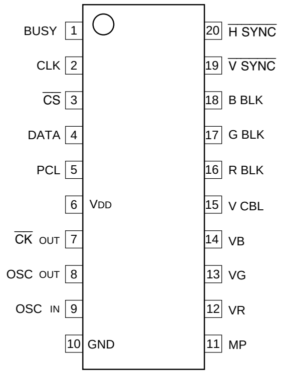
—TOP VIEW—

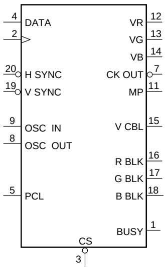

1
2
3
4 VDD
5
6
7
8
9
10
GND 11
12
13
14

UPD6453GT-610 (NEC)FLAT PACKAGE

C-MOS ON-SCREEN CHARACTER DISPLAY

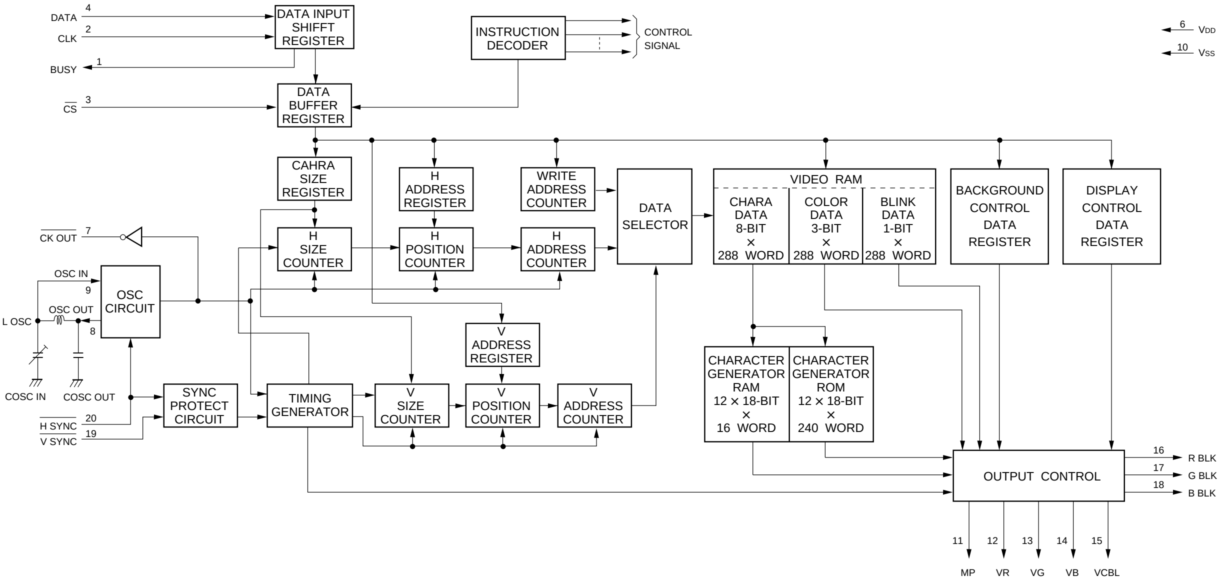
—TOP VIEW—


BUSY 1
CLK 2
CS 3
DATA 4
PCL 5
6 VDD
CK OUT 7
OSC OUT 8
OSC IN 9
10 GND
20 H SYNC
19 V SYNC
18 B BLK
17 G BLK
16 R BLK
15 V CBL
14 VB
13 VG
12 VR
11 MP


4 DATA
2
20 H SYNC
19 V SYNC
9 OSC IN
8 OSC OUT
5 PCL
CS 3
VR 12
VG 13
VB 14
CK OUT 7
MP 11
V CBL 15
R BLK 16
G BLK 17
B BLK 18
BUSY 1

INPUT	
CLK	: CLOCK
CS	: CHIP SELECT
DATA	: SERIAL DATA
H SYNC	: HORIZONTAL SYNC
OSC IN	: OSCILLATOR IN
PCL	: POWER ON CLEAR
V SYNC	: VERTICAL SYNC

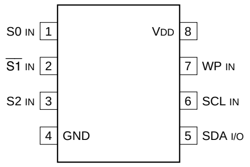
OUTPUT	
BBLK, RBLK, GBLK	: B, R, G, BLANKING
BUSY	: BUSY OUT
CK OUT	: CLOCK
MP	: MASK PULSE
OSC OUT	: OSCILLATOR OUT
VR, VG, VB	: R, G, B, CHARACTER DATA
VCBL	: VIDEO CUT BLANKING


DATA 4
CLK 2
BUSY 1
CS 3
DATA INPUT SHIFFT REGISTER
INSTRUCTION DECODER
CONTROL SIGNAL
6 VDD
10 VSS
DATA BUFFER REGISTER
CAHRA SIZE REGISTER
H ADDRESS REGISTER
WRITE ADDRESS COUNTER
DATA SELECTOR
VIDEO RAM
CHARA DATA 8-BIT × 288 WORD
COLOR DATA 3-BIT × 288 WORD
BLINK DATA 1-BIT × 288 WORD
BACKGROUND CONTROL DATA REGISTER
DISPLAY CONTROL DATA REGISTER
CK OUT 7
H SIZE COUNTER
H POSITION COUNTER
H ADDRESS COUNTER
OSC IN 9
OSC OUT 8
OSC CIRCUIT
L OSC
COSC IN
COSC OUT
V ADDRESS REGISTER
CHARACTER GENERATOR RAM 12 × 18-BIT × 16 WORD
CHARACTER GENERATOR ROM 12 × 18-BIT × 240 WORD
H SYNC 20
V SYNC 19
SYNC PROTECT CIRCUIT
TIMING GENERATOR
V SIZE COUNTER
V POSITION COUNTER
V ADDRESS COUNTER
OUTPUT CONTROL
16 R BLK
17 G BLK
18 B BLK
11 MP
12 VR
13 VG
14 VB
15 VCBL

X24164SIC7000 (XICOR)(16 K-BIT)FLAT PACKAGE
X24164SIT1

C-MOS SERIAL EEPROM

—TOP VIEW—


S0 IN 1
S1 IN 2
S2 IN 3
4 GND
VDD 8
7 WP IN
6 SCL IN
5 SDA I/O

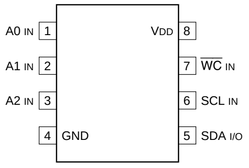
INPUT	
S0, S1, S2	: DEVICE SELECT
SCL	: SERIAL CLOCK
WP	: WRITE PROTECT

INPUT/OUTPUT	
SDA	: SERIAL DATA

X24C02S-3.0-C7000 (XICOR)(2 K-BIT)FLAT PACKAGE
X24C02S-T1

C-MOS SERIAL EEPROM

—TOP VIEW—


A0 IN 1
A1 IN 2
A2 IN 3
4 GND
VDD 8
7 WC IN
6 SCL IN
5 SDA I/O

INPUT	
A0 - A2	: ADDRESS
SCL	: SERIAL CLOCK
WC	: WRITE CONTROL

INPUT/OUTPUT	
SDA	: SERIAL DATA

NOTE :

TYPE	PIN 7
NM24C16	NC
X24C02	WC
X24C04	TEST

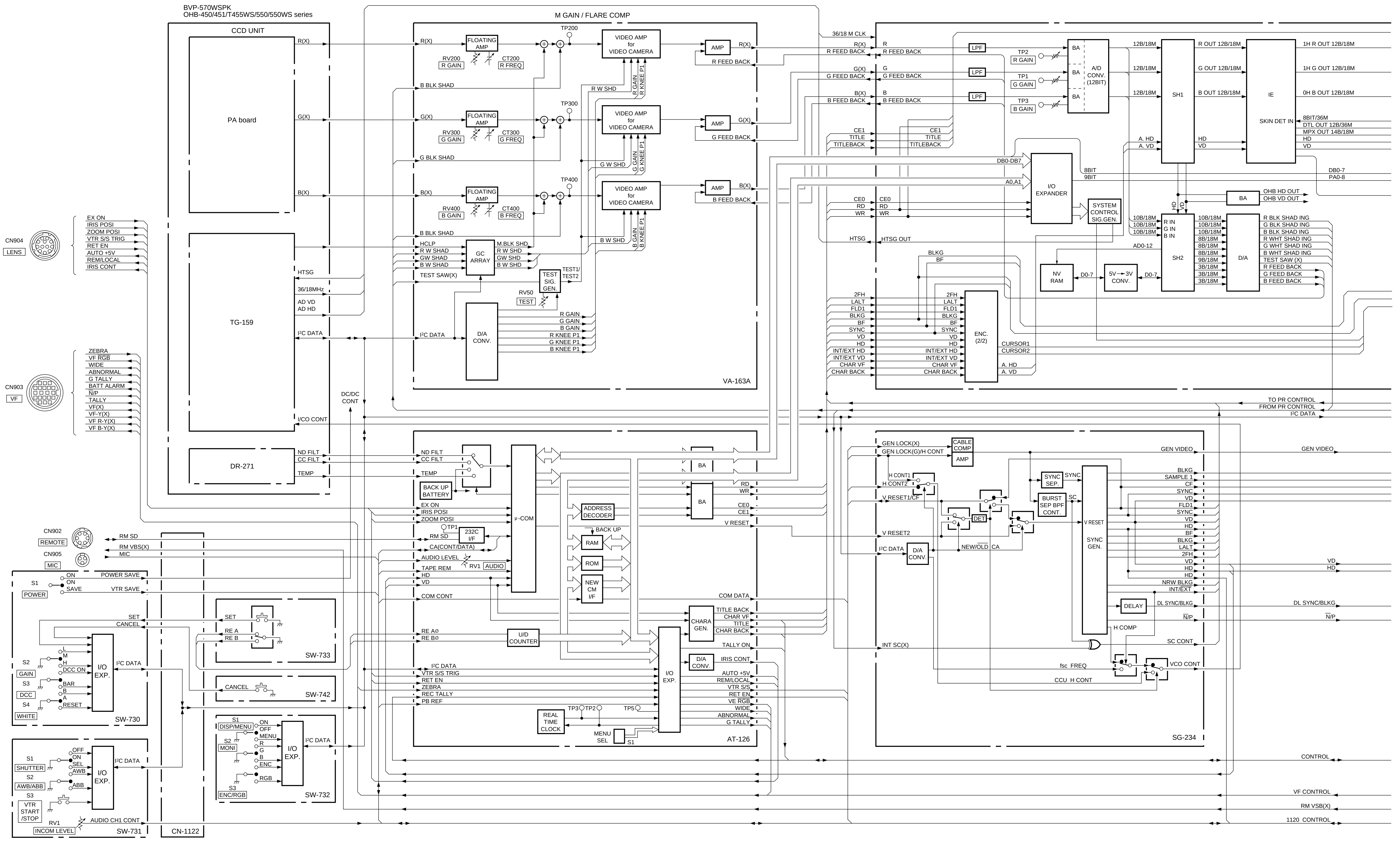
Section 8

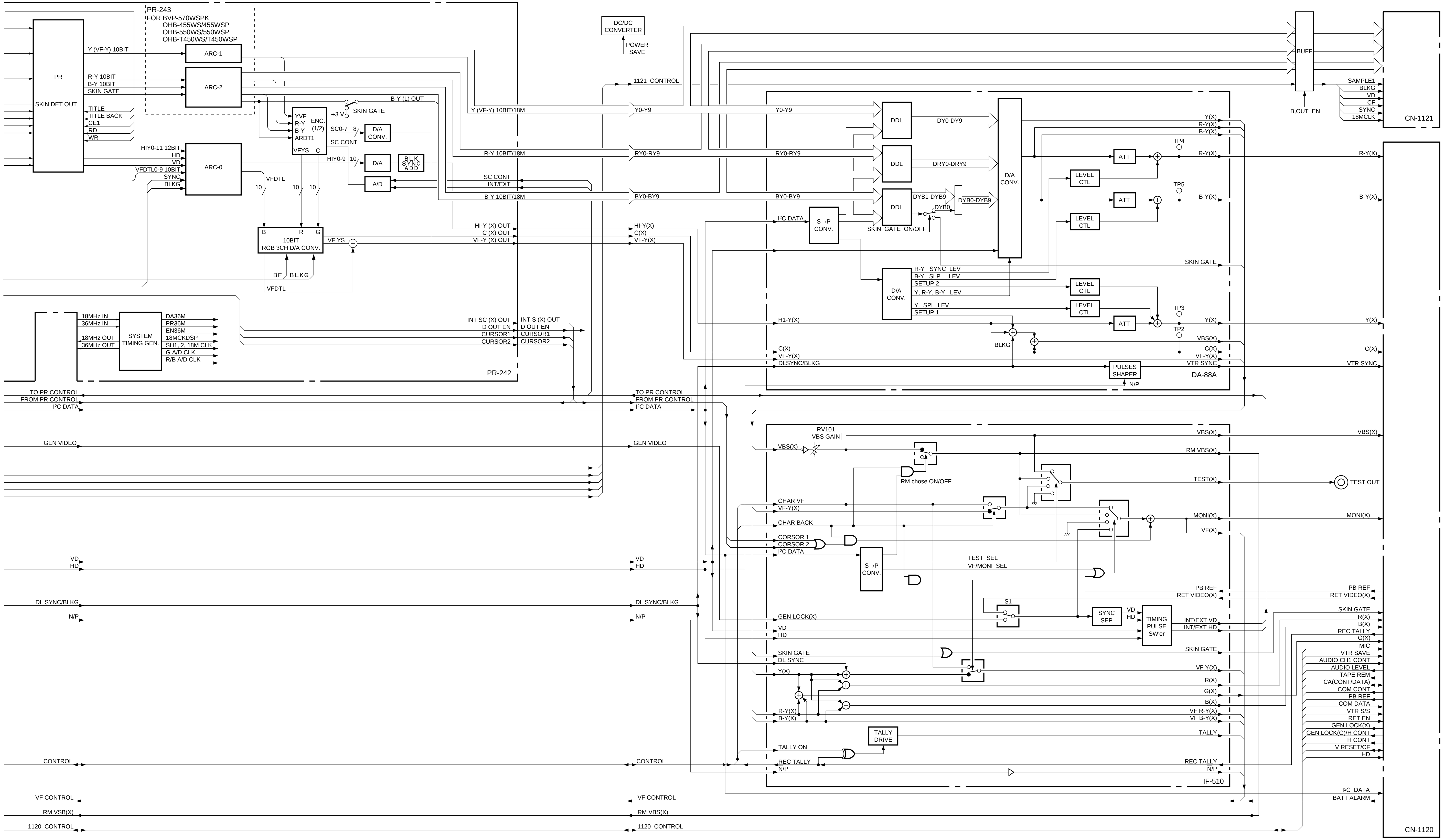
Block Diagrams

Block Diagram Index

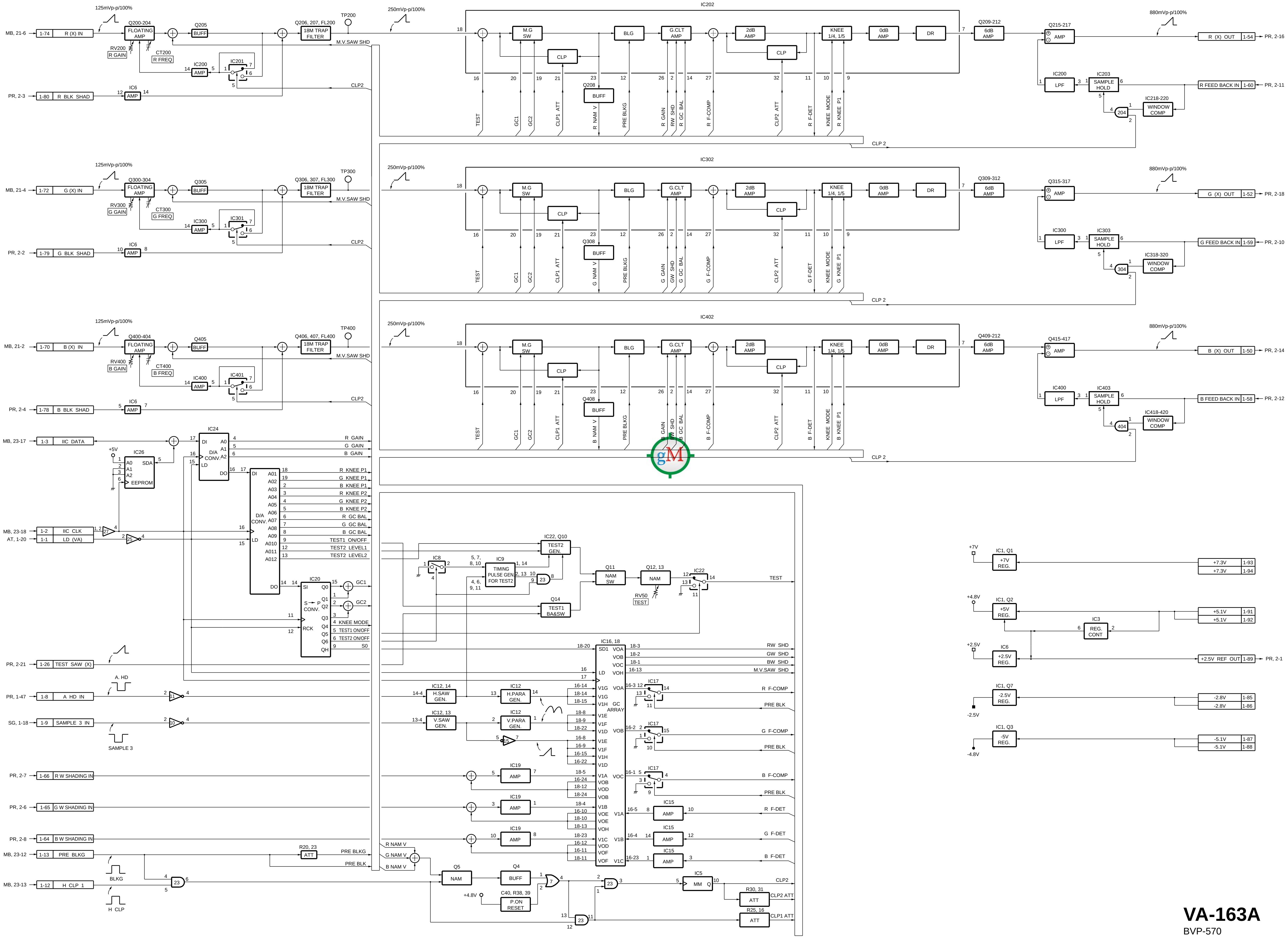
Page

AT-126 8-5
DA-88A 8-7
IF-510 8-8
Overall Block 8-2
PR-242 8-10
SG-234 8-6
VA-163A 8-4

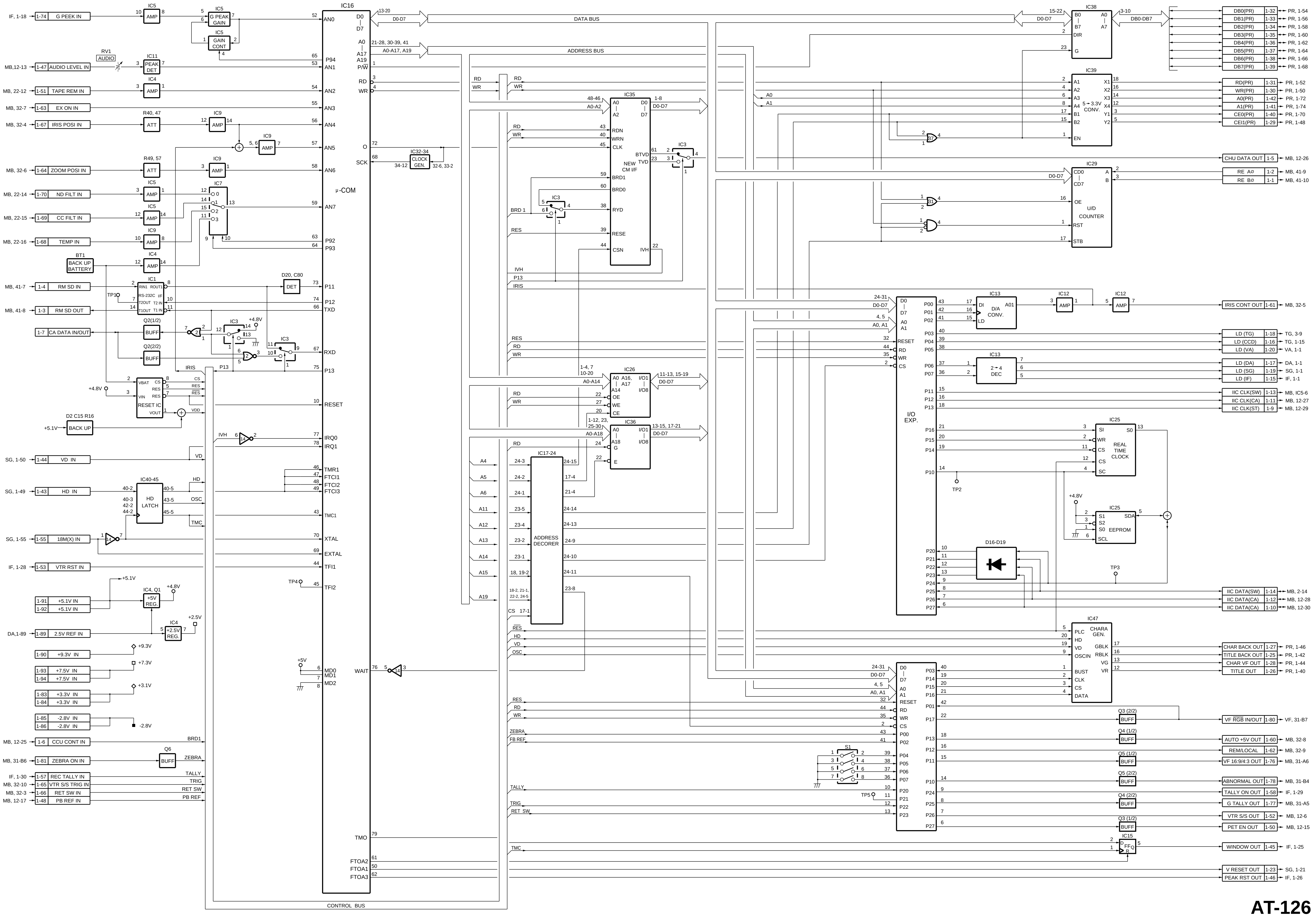

BVP-570WSPK
OHB-450/451/T455WS/550/550WS series
CCD UNIT
PA board
TG-159
DR-271
R(X)
G(X)
B(X)
HTSG
36/18MHz
AD VD
AD HD
I²C DATA
I/CO CONT
ND FILT
CC FILT
TEMP
CN904
LENS
EX ON
IRIS POSI
ZOOM POSI
VTR S/S TRIG
RET EN
AUTO +5V
REM/LOCAL
IRIS CONT
CN903
VF
ZEBRA
VF RGB
WIDE
ABNORMAL
G TALLY
BATT ALARM
N/P
TALLY
VF(X)
VF-Y(X)
VF R-Y(X)
VF B-Y(X)
M GAIN / FLARE COMP
FLOATING AMP
RV200
R GAIN
CT200
R FREQ
RV300
G GAIN
CT300
G FREQ
RV400
B GAIN
CT400
B FREQ
TP200
TP300
TP400
VIDEO AMP for VIDEO CAMERA
AMP
R FEED BACK
G FEED BACK
B FEED BACK
B BLK SHAD
G BLK SHAD
R W SHD
G W SHD
B W SHD
R GAIN
R KNEE P1
G GAIN
G KNEE P1
B GAIN
B KNEE P1
HCLP
R W SHAD
GW SHAD
B W SHAD
GC ARRAY
M.BLK SHD
R W SHD
GW SHD
B W SHD
TEST SAW(X)
TEST SIG. GEN.
TEST1/
TEST2
RV50
TEST
D/A CONV.
R GAIN
G GAIN
B GAIN
R KNEE P1
G KNEE P1
B KNEE P1
VA-163A
DC/DC CONT
36/18 M CLK
R
G
B
LPF
TP2
R GAIN
TP1
G GAIN
TP3
B GAIN
BA
A/D CONV. (12BIT)
12B/18M
SH1
R OUT 12B/18M
G OUT 12B/18M
B OUT 12B/18M
IE
SKIN DET IN
1H R OUT 12B/18M
1H G OUT 12B/18M
0H B OUT 12B/18M
8BIT/36M
DTL OUT 12B/36M
MPX OUT 14B/18M
HD
VD
A. HD
A. VD
CE1
TITLE
TITLEBACK
DB0-DB7
A0,A1
I/O EXPANDER
8BIT
9BIT
DB0-7
PA0-8
OHB HD OUT
OHB VD OUT
CE0
RD
WR
SYSTEM CONTROL SIG.GEN.
HTSG
HTSG OUT
10B/18M
R IN
G IN
B IN
SH2
8B/18M
9B/18M
3B/18M
AD0-12
D/A
R BLK SHAD ING
G BLK SHAD ING
B BLK SHAD ING
R WHT SHAD ING
G WHT SHAD ING
B WHT SHAD ING
TEST SAW (X)
R FEED BACK
G FEED BACK
B FEED BACK
NV RAM
D0-7
5V→3V CONV.
BLKG
BF
2FH
LALT
FLD1
SYNC
INT/EXT HD
INT/EXT VD
CHAR VF
CHAR BACK
ENC. (2/2)
CURSOR1
CURSOR2
TO PR CONTROL
FROM PR CONTROL
I²C DATA
BACK UP BATTERY
μ-COM
TP1
RM SD
232C I/F
CA(CONT/DATA)
AUDIO LEVEL
RV1
AUDIO
TAPE REM
COM CONT
ADDRESS DECODER
BACK UP
RAM
ROM
NEW CM I/F
COM DATA
CHARA GEN.
TITLE BACK
CHAR VF
TITLE
CHAR BACK
TALLY ON
D/A CONV.
IRIS CONT
I/O EXP.
AUTO +5V
REM/LOCAL
VTR S/S
RET EN
VE RGB
WIDE
ABNORMAL
G TALLY
RE A
RE B
U/D COUNTER
VTR S/S TRIG
ZEBRA
REC TALLY
PB REF
REAL TIME CLOCK
TP3
TP2
TP5
MENU SEL
S1
AT-126
V RESET
CN902
REMOTE
CN905
MIC
RM VBS(X)
S1
POWER
ON
SAVE
POWER SAVE
VTR SAVE
SET
CANCEL
S2
GAIN
L
M
H
DCC ON
S3
DCC
BAR
S4
WHITE
RESET
SW-730
SW-733
SW-742
DISP/MENU
OFF
MENU
S2
MONI
ENC
S3
ENC/RGB
RGB
SW-732
SHUTTER
SEL
AWB
AWB/ABB
ABB
VTR START /STOP
RV1
INCOM LEVEL
AUDIO CH1 CONT
SW-731
CN-1122
GEN LOCK(X)
GEN LOCK(G)/H CONT
CABLE COMP
H CONT1
H CONT2
V RESET1/CF
V RESET2
SYNC SEP.
BURST SEP BPF CONT.
SC
DET
NEW/OLD
CA
SYNC GEN.
GEN VIDEO
SAMPLE 1
CF
FLD1
NRW BLKG
INT/EXT
DELAY
DL SYNC/BLKG
N/P
H COMP
INT SC(X)
SC CONT
fsc FREQ
CCU H CONT
VCO CONT
SG-234
CONTROL
VF CONTROL
RM VSB(X)
1120 CONTROL


PR-243
FOR BVP-570WSPK
OHB-455WS/455WSP
OHB-550WS/550WSP
OHB-T450WS/T450WSP
PR
SKIN DET OUT
ARC-1
ARC-2
ARC-0
ENC. (1/2)
D/A CONV.
D/A
BLK SYNC ADD
A/D
10BIT RGB 3CH D/A CONV.
SYSTEM TIMING GEN.
PR-242
DC/DC CONVERTER
POWER SAVE
1121 CONTROL
DDL
D/A CONV.
S→P CONV.
ATT
LEVEL CTL
PULSES SHAPER
DA-88A
BUFF
B,OUT EN
CN-1121
RV101 VBS GAIN
RM chose ON/OFF
TEST OUT
S1
SYNC SEP
TIMING PULSE SW'er
TALLY DRIVE
IF-510
CN-1120
TO PR CONTROL
FROM PR CONTROL
I²C DATA
GEN VIDEO
VD
HD
DL SYNC/BLKG
N/P
CONTROL
VF CONTROL
RM VSB(X)
1120 CONTROL

Overall
BVP-570/570WSPK

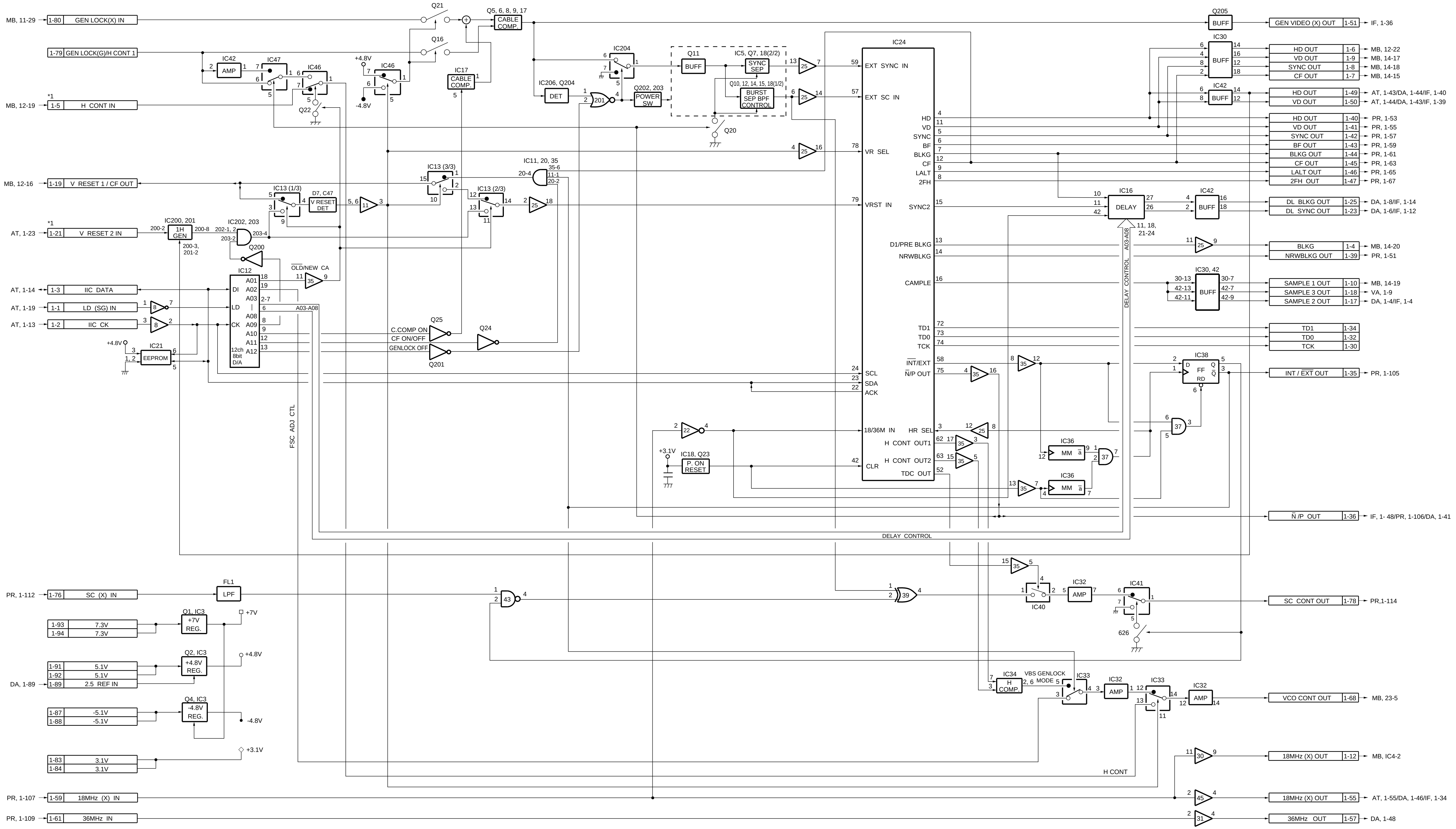

125mVp-p/100%
MB, 21-6
1-74 R (X) IN
Q200-204 FLOATING AMP
RV200 R GAIN
CT200 R FREQ
Q205 BUFF
IC200 AMP
IC201
PR, 2-3
1-80 R BLK SHAD
IC6 AMP
Q206, 207, FL200 18M TRAP FILTER
TP200
M.V.SAW SHD
CLP2
250mVp-p/100%
IC202
M.G SW
CLP
BLG
G.CLT AMP
2dB AMP
KNEE 1/4, 1/5
0dB AMP
DR
Q208 BUFF
TEST
GC1
GC2
CLP1 ATT
R NAM V
PRE BLKG
R GAIN
RW SHD
R GC BAL
R F-COMP
CLP2 ATT
R F-DET
KNEE MODE
R KNEE P1
Q209-212 6dB AMP
Q215-217 AMP
880mVp-p/100%
R (X) OUT 1-54 PR, 2-16
IC200 LPF
IC203 SAMPLE HOLD
R FEED BACK IN 1-60 PR, 2-11
IC218-220 WINDOW COMP
204
CLP 2
MB, 21-4
1-72 G (X) IN
Q300-304 FLOATING AMP
RV300 G GAIN
CT300 G FREQ
Q305 BUFF
IC300 AMP
IC301
PR, 2-2
1-79 G BLK SHAD
Q306, 307, FL300 18M TRAP FILTER
TP300
IC302
Q308 BUFF
G NAM V
G GAIN
GW SHD
G GC BAL
G F-COMP
G F-DET
G KNEE P1
Q309-312 6dB AMP
Q315-317 AMP
G (X) OUT 1-52 PR, 2-18
IC300 LPF
IC303 SAMPLE HOLD
G FEED BACK IN 1-59 PR, 2-10
IC318-320 WINDOW COMP
304
MB, 21-2
1-70 B (X) IN
Q400-404 FLOATING AMP
RV400 B GAIN
CT400 B FREQ
Q405 BUFF
IC400 AMP
IC401
PR, 2-4
1-78 B BLK SHAD
Q406, 407, FL400 18M TRAP FILTER
TP400
IC402
Q408 BUFF
B NAM V
B GAIN
BW SHD
B GC BAL
B F-COMP
B F-DET
B KNEE P1
Q409-212 6dB AMP
Q415-417 AMP
B (X) OUT 1-50 PR, 2-14
IC400 LPF
IC403 SAMPLE HOLD
B FEED BACK IN 1-58 PR, 2-12
IC418-420 WINDOW COMP
404
MB, 23-17
1-3 IIC DATA
+5V
IC26 EEPROM
IC24 D/A CONV.
R GAIN
G GAIN
B GAIN
D/A CONV.
R KNEE P1
G KNEE P1
B KNEE P1
R KNEE P2
G KNEE P2
B KNEE P2
R GC BAL
G GC BAL
B GC BAL
TEST1 ON/OFF
TEST2 LEVEL1
TEST2 LEVEL2
MB, 23-18
1-2 IIC CLK
AT, 1-20
1-1 LD (VA)
IC20 S → P CONV.
GC1
GC2
KNEE MODE
TEST1 ON/OFF
TEST2 ON/OFF
S0
IC8
IC9 TIMING PULSE GEN. FOR TEST2
IC22, Q10 TEST2 GEN.
Q14 TEST1 BA&SW
Q11 NAM SW
Q12, 13 NAM
RV50 TEST
IC22
TEST
PR, 2-21
1-26 TEST SAW (X)
A. HD
PR, 1-47
1-8 A HD IN
SG, 1-18
1-9 SAMPLE 3 IN
SAMPLE 3
IC12, 14 H.SAW GEN.
IC12 H.PARA GEN.
IC12, 13 V.SAW GEN.
IC12 V.PARA GEN.
IC16, 18 GC ARRAY
RW SHD
GW SHD
BW SHD
M.V.SAW SHD
IC17
R F-COMP
PRE BLK
G F-COMP
B F-COMP
PR, 2-7
1-66 R W SHADING IN
PR, 2-6
1-65 G W SHADING IN
PR, 2-8
1-64 B W SHADING IN
IC19 AMP
IC15 AMP
R F-DET
G F-DET
B F-DET
MB, 23-12
1-13 PRE BLKG
R20, 23 ATT
PRE BLKG
PRE BLK
R NAM V
G NAM V
B NAM V
BLKG
MB, 23-13
1-12 H CLP 1
H CLP
Q5 NAM
Q4 BUFF
+4.8V
C40, R38, 39 P.ON RESET
IC5 MM
CLP2
R30, 31 ATT
CLP2 ATT
R25, 16 ATT
CLP1 ATT
+7V
IC1, Q1 +7V REG.
+7.3V 1-93
+7.3V 1-94
+4.8V
IC1, Q2 +5V REG.
+5.1V 1-91
+5.1V 1-92
IC3 REG. CONT
+2.5V
IC6 +2.5V REG.
+2.5V REF OUT 1-89 PR, 2-1
IC1, Q7 -2.5V REG.
-2.5V
-2.8V 1-85
-2.8V 1-86
IC1, Q3 -5V REG.
-4.8V
-5.1V 1-87
-5.1V 1-88

VA-163A
BVP-570


IC16
μ-COM
G PEEK IN
AUDIO LEVEL IN
TAPE REM IN
EX ON IN
IRIS POSI IN
ZOOM POSI IN
ND FILT IN
CC FILT IN
TEMP IN
BACK UP BATTERY
RM SD IN
RM SD OUT
CA DATA IN/OUT
RESET IC
BACK UP
VD IN
HD IN
HD LATCH
18M(X) IN
VTR RST IN
+5.1V IN
+5V REG.
2.5V REF IN
+2.5V REG.
+9.3V IN
+7.5V IN
+3.3V IN
-2.8V IN
CCU CONT IN
ZEBRA ON IN
REC TALLY IN
VTR S/S TRIG IN
RET SW IN
PB REF IN
AMP
ATT
G PEAK GAIN
GAIN CONT
PEAK DET
DET
BUFF
CLOCK GEN.
DATA BUS
ADDRESS BUS
CONTROL BUS
IC35
NEW CM I/F
IC26
IC36
IC17-24
ADDRESS DECORER
IC38
IC39
5→3.3V CONV.
IC29
U/D COUNTER
IC13
D/A CONV.
2→4 DEC
I/O EXP.
IC25
REAL TIME CLOCK
EEPROM
D16-D19
IC47
CHARA GEN.
IC15
DB0(PR) … DB7(PR)
RD(PR)
WR(PR)
A0(PR)
A1(PR)
CE0(PR)
CEI1(PR)
CHU DATA OUT
RE A
RE B
IRIS CONT OUT
LD (TG)
LD (CCD)
LD (VA)
LD (DA)
LD (SG)
LD (IF)
IIC CLK(SW)
IIC CLK(CA)
IIC CLK(ST)
IIC DATA(SW)
IIC DATA(CA)
IIC DATA(CA)
CHAR BACK OUT
TITLE BACK OUT
CHAR VF OUT
TITLE OUT
VF RGB IN/OUT
AUTO +5V OUT
REM/LOCAL
VF 16:9/4:3 OUT
ABNORMAL OUT
TALLY ON OUT
G TALLY OUT
VTR S/S OUT
PET EN OUT
WINDOW OUT
V RESET OUT
PEAK RST OUT
TP1
TP2
TP3
TP4
TP5
S1

AT-126
BVP-570

*For CA-550/570 series


MB, 11-29 1-80 GEN LOCK(X) IN
1-79 GEN LOCK(G)/H CONT 1
MB, 12-19 1-5 H CONT IN
MB, 12-16 1-19 V RESET 1 / CF OUT
AT, 1-23 1-21 V RESET 2 IN
AT, 1-14 1-3 IIC DATA
AT, 1-19 1-1 LD (SG) IN
AT, 1-13 1-2 IIC CK
PR, 1-112 1-76 SC (X) IN
1-93 7.3V
1-94 7.3V
1-91 5.1V
1-92 5.1V
DA, 1-89 1-89 2.5 REF IN
1-87 -5.1V
1-88 -5.1V
1-83 3.1V
1-84 3.1V
PR, 1-107 1-59 18MHz (X) IN
PR, 1-109 1-61 36MHz IN
Q21
Q16
Q5, 6, 8, 9, 17 CABLE COMP.
IC42 AMP
IC47
IC46
Q22
IC17 CABLE COMP.
IC204
IC206, Q204 DET
201
Q202, 203 POWER SW
Q11 BUFF
IC5, Q7, 18(2/2) SYNC SEP
Q10, 12, 14, 15, 18(1/2) BURST SEP BPF CONTROL
Q20
IC24
EXT SYNC IN
EXT SC IN
VR SEL
VRST IN
HD
VD
SYNC
BF
BLKG
CF
LALT
2FH
SYNC2
D1/PRE BLKG
NRWBLKG
CAMPLE
TD1
TD0
TCK
INT/EXT
N/P OUT
SCL
SDA
ACK
18/36M IN
HR SEL
H CONT OUT1
H CONT OUT2
CLR
TDC OUT
IC13 (1/3)
D7, C47 V RESET DET
IC13 (3/3)
IC13 (2/3)
IC11, 20, 35
IC200, 201 1H GEN
IC202, 203
Q200
IC12
DI
LD
CK
A01
A02
A03
A08
A09
A10
A11
A12
12ch 8bit D/A
OLD/NEW CA
IC21 EEPROM
Q25 C.COMP ON
CF ON/OFF
Q24
GENLOCK OFF
Q201
FSC ADJ CTL
IC18, Q23 P. ON RESET
Q205 BUFF
IC30 BUFF
IC42 BUFF
IC16 DELAY
DELAY CONTROL
IC38 FF
IC36 MM
IC36 MM
FL1 LPF
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Q2, IC3 +4.8V REG.
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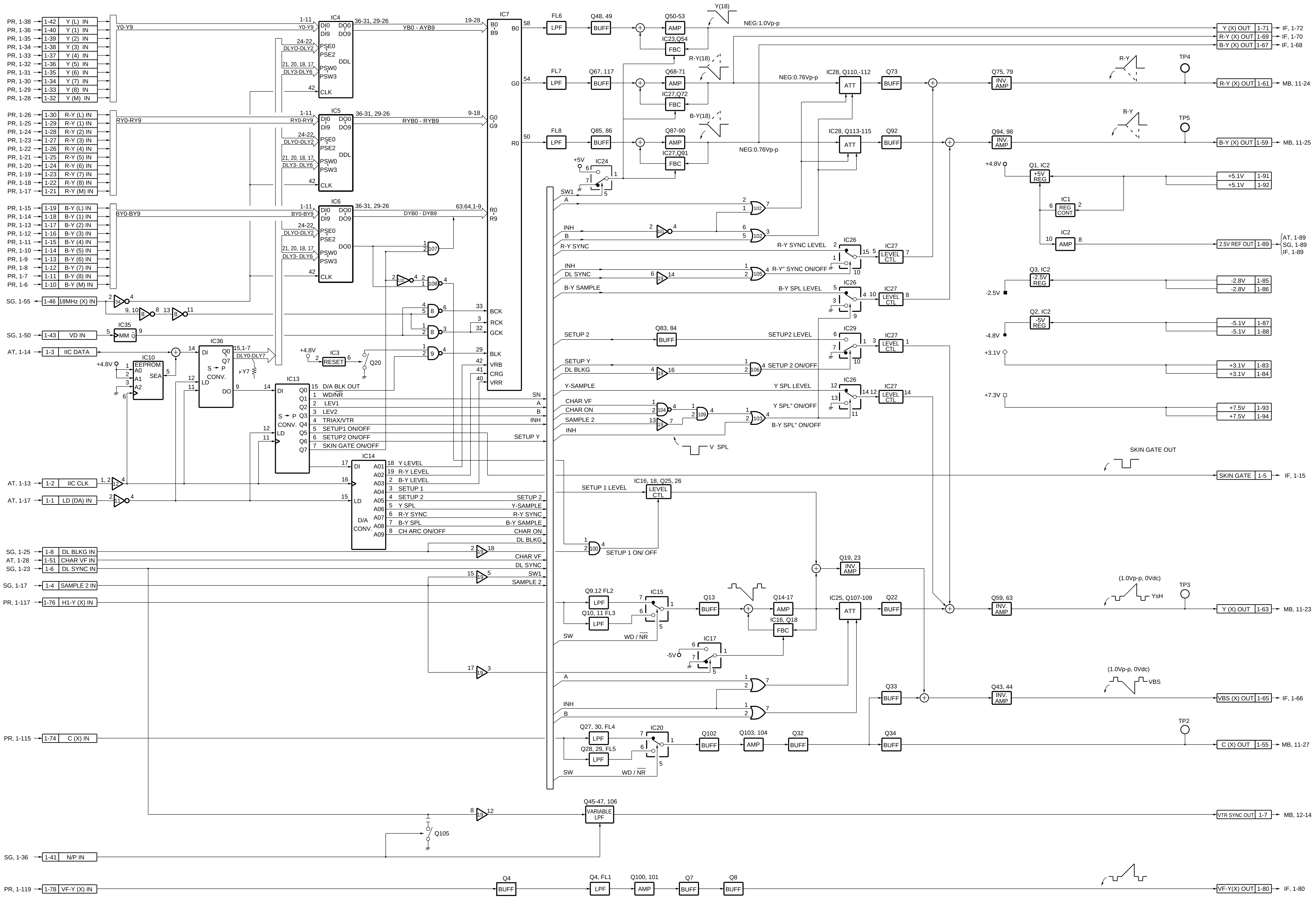
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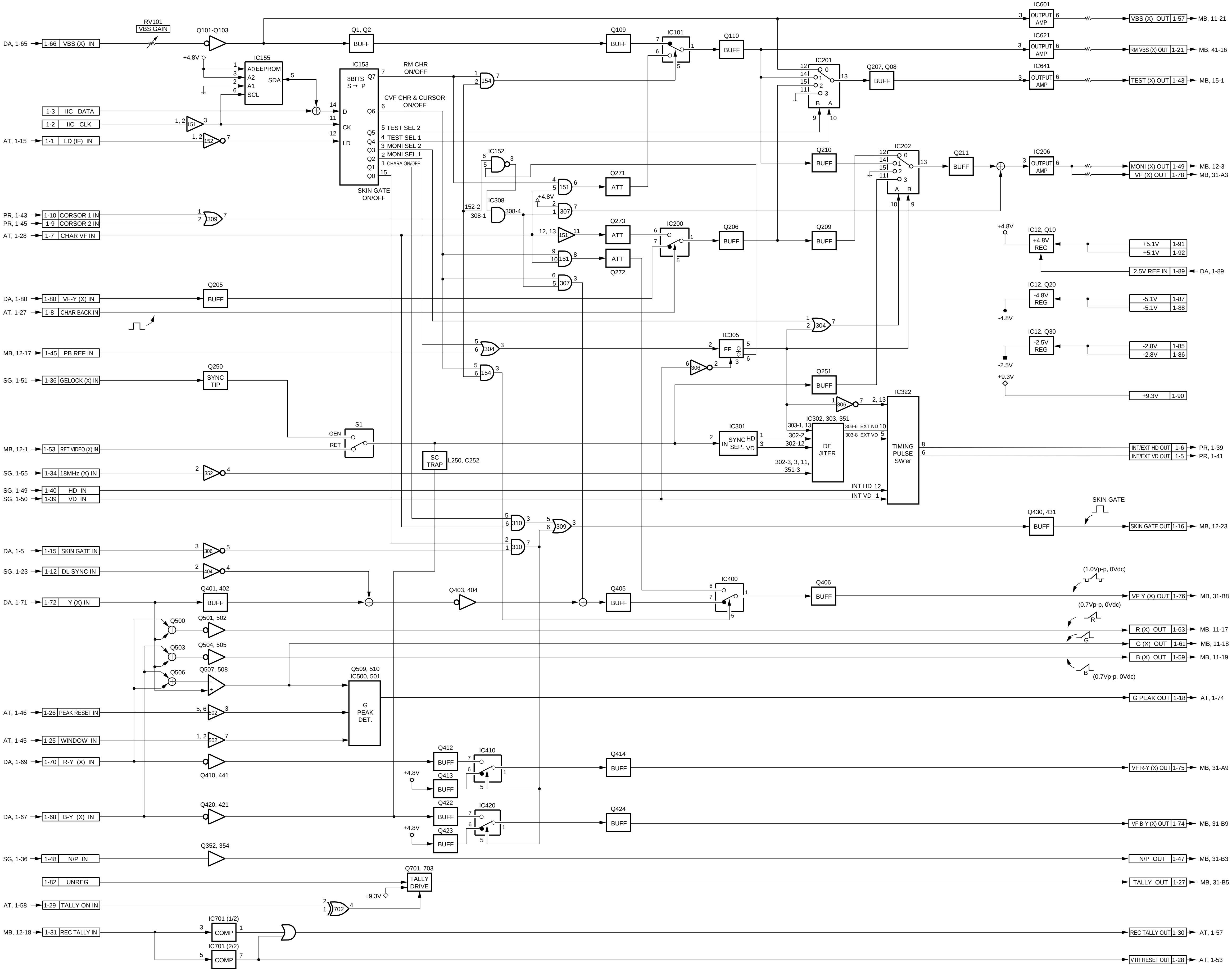
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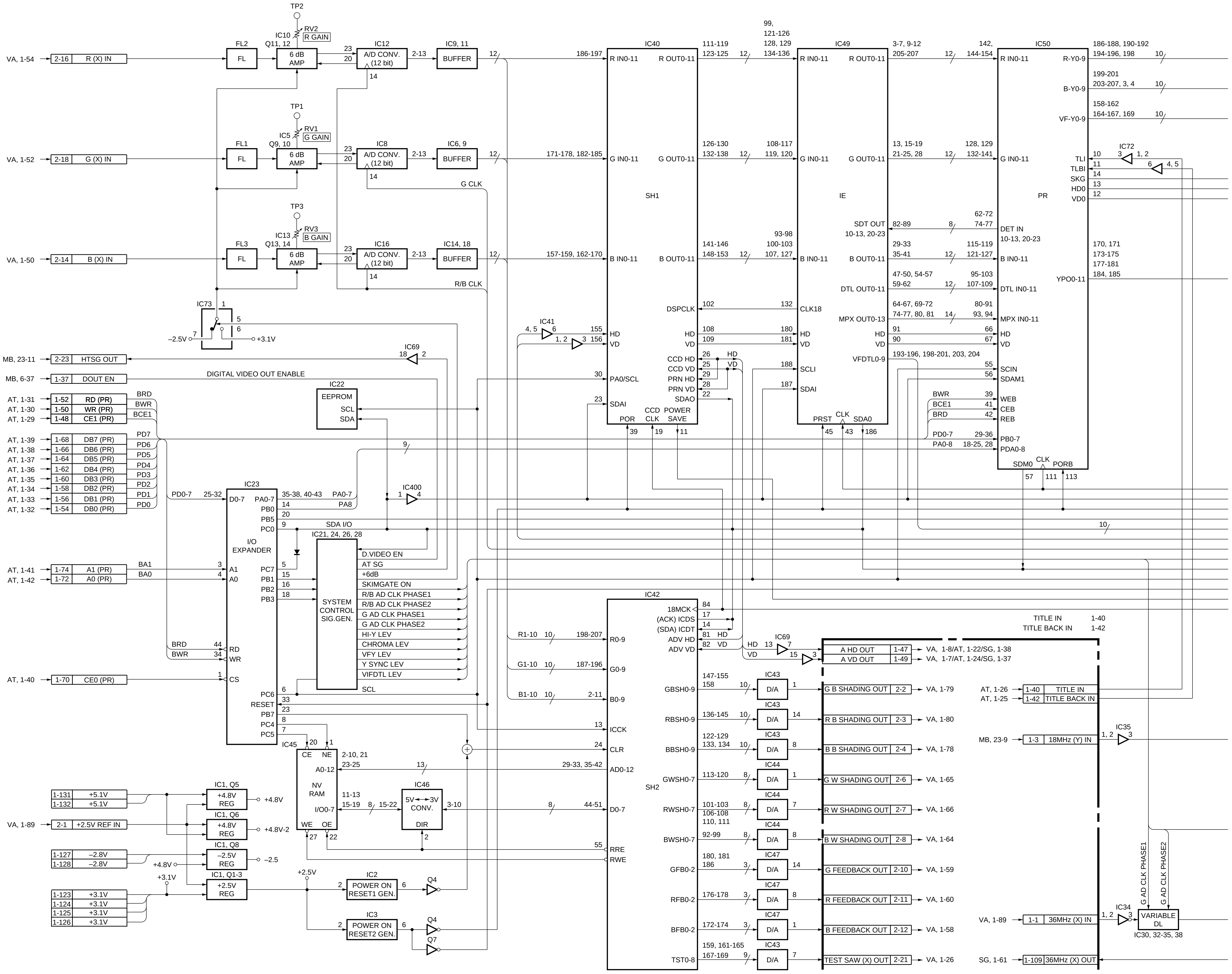
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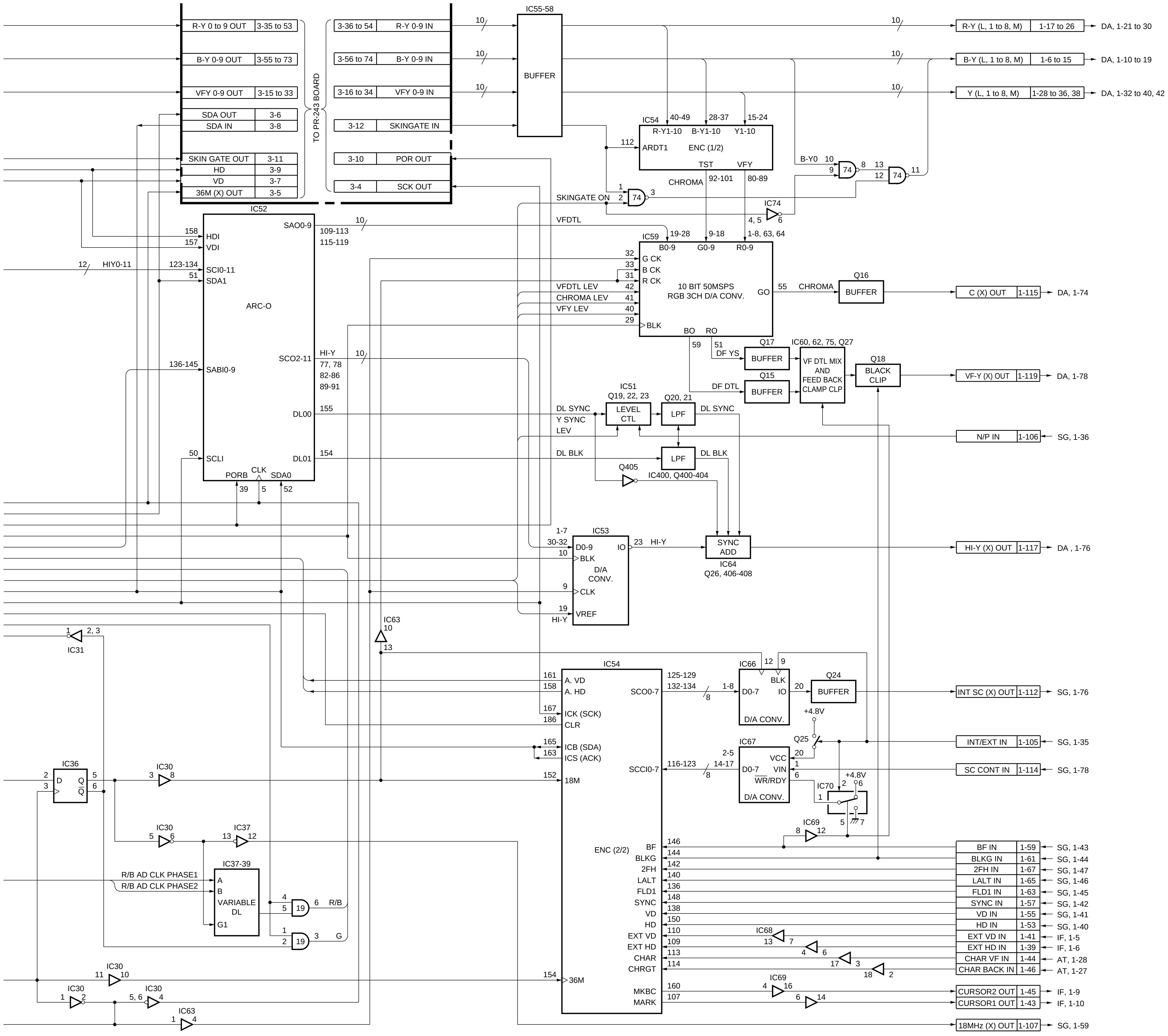

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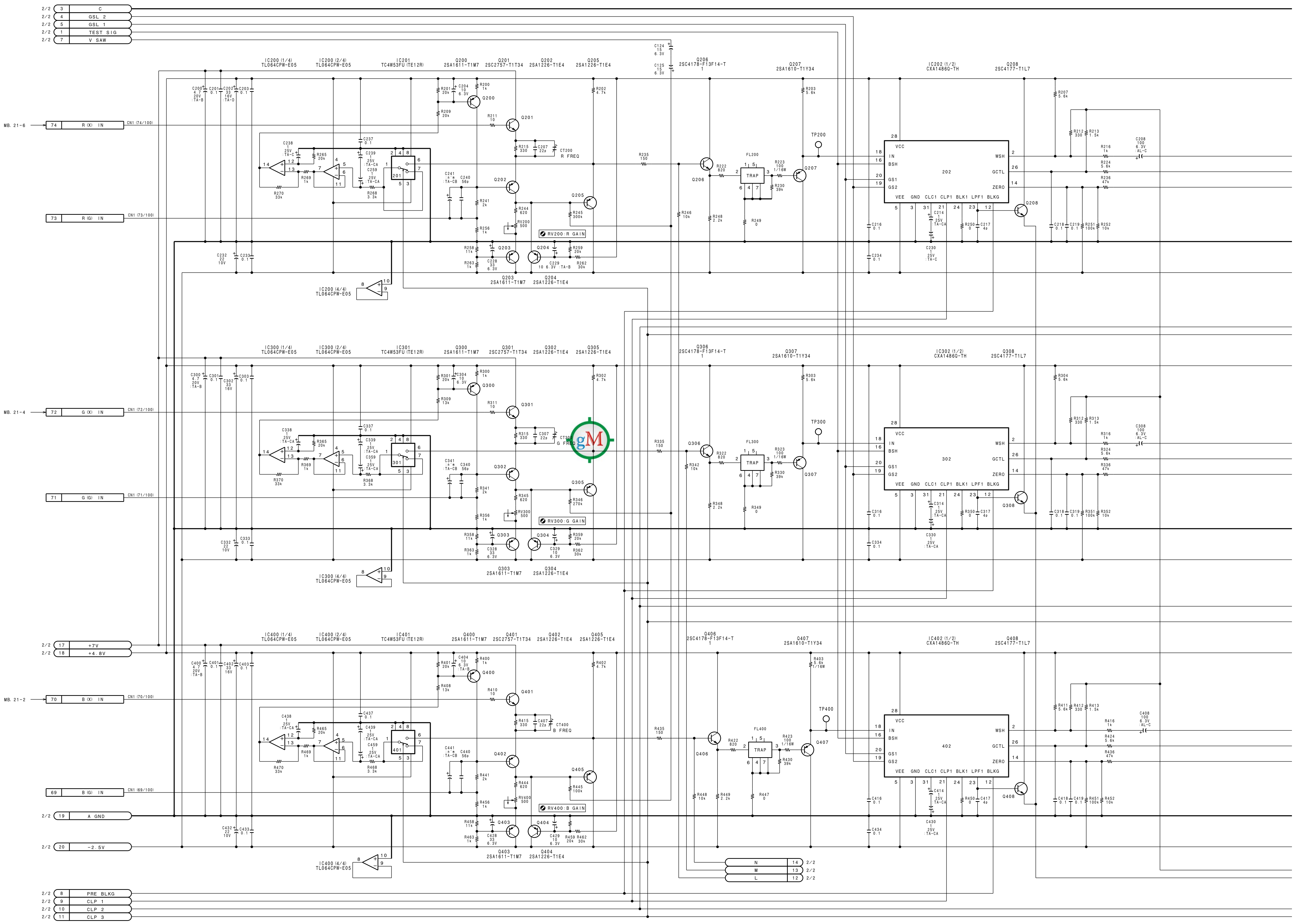
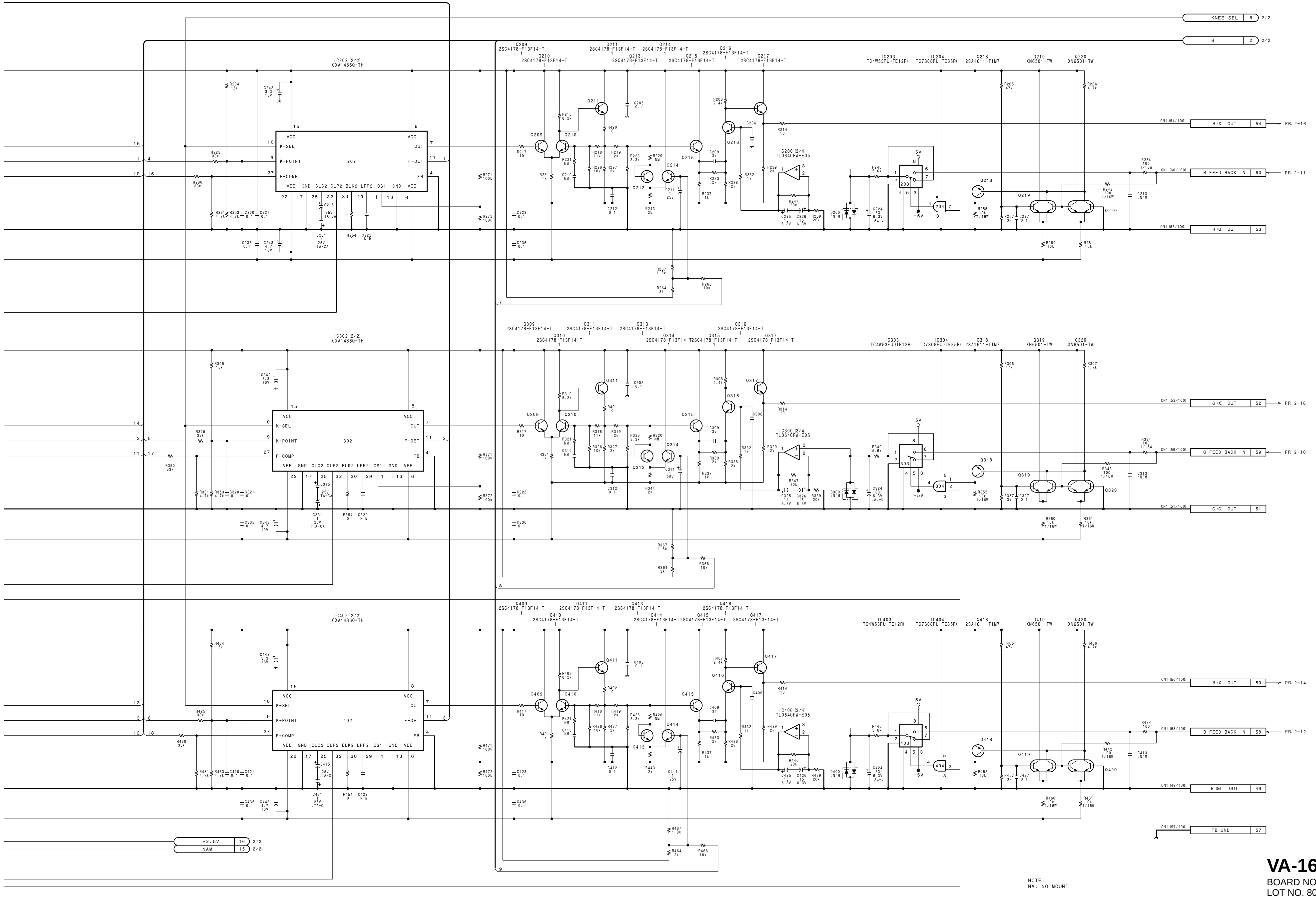
BVP-570 (SY)


2/2 3 C
2/2 4 GSL 2
2/2 5 GSL 1
2/2 1 TEST SIG
2/2 7 V SAW
MB. 21-6
74 R (X) IN
CN1 (74/100)
73 R (G) IN
CN1 (73/100)
MB. 21-4
72 G (X) IN
CN1 (72/100)
71 G (G) IN
CN1 (71/100)
2/2 17 +7V
2/2 18 +4.8V
MB. 21-2
70 B (X) IN
CN1 (70/100)
69 B (G) IN
CN1 (69/100)
2/2 19 A GND
2/2 20 -2.5V
2/2 8 PRE BLKG
2/2 9 CLP 1
2/2 10 CLP 2
2/2 11 CLP 3
IC200 (1/4) TL064CPW-E05
IC200 (2/4) TL064CPW-E05
IC200 (4/4) TL064CPW-E05
IC201 TC4W53FU(TE12R)
Q200 2SA1611-T1M7
Q201 2SC2757-T1T34
Q202 2SA1226-T1E4
Q205 2SA1226-T1E4
Q203 2SA1611-T1M7
Q204 2SA1226-T1E4
Q206 2SC4178-F13F14-T
Q207 2SA1610-T1Y34
IC202 (1/2) CXA1486Q-TH
Q208 2SC4177-T1L7
CT200 R FREQ
RV200 R GAIN
FL200 TRAP
TP200
IC300 (1/4) TL064CPW-E05
IC300 (2/4) TL064CPW-E05
IC300 (4/4) TL064CPW-E05
IC301 TC4W53FU(TE12R)
Q300 2SA1611-T1M7
Q301 2SC2757-T1T34
Q302 2SA1226-T1E4
Q305 2SA1226-T1E4
Q303 2SA1611-T1M7
Q304 2SA1226-T1E4
Q306 2SC4178-F13F14-T
Q307 2SA1610-T1Y34
IC302 (1/2) CXA1486Q-TH
Q308 2SC4177-T1L7
G FREQ
RV300 G GAIN
FL300 TRAP
TP300
IC400 (1/4) TL064CPW-E05
IC400 (2/4) TL064CPW-E05
IC400 (4/4) TL064CPW-E05
IC401 TC4W53FU(TE12R)
Q400 2SA1611-T1M7
Q401 2SC2757-T1T34
Q402 2SA1226-T1E4
Q405 2SA1226-T1E4
Q403 2SA1611-T1M7
Q404 2SA1226-T1E4
Q406 2SC4178-F13F14-T
Q407 2SA1610-T1Y34
IC402 (1/2) CXA1486Q-TH
Q408 2SC4177-T1L7
CT400 B FREQ
RV400 B GAIN
FL400 TRAP
TP400
VCC IN BSH GS1 GS2 WSH GCTL ZERO
VEE GND CLC1 CLP1 BLK1 LPF1 BLKG
N 14 2/2
M 13 2/2
L 12 2/2

9-2

VA-163A (1/2)


KNEE SEL 6 2/2
B 2 2/2
IC202 (2/2) CXA1486Q-TH
IC302 (2/2) CXA1486Q-TH
IC402 (2/2) CXA1486Q-TH
VCC
K-SEL
K-POINT
F-COMP
OUT
F-DET
FB
VEE GND CLC2 CLP2 BLK2 LPF2 OS1 GND VEE
202
302
402
Q209 2SC4178-F13F14-T
Q210 2SC4178-F13F14-T
Q211 2SC4178-F13F14-T
Q213 2SC4178-F13F14-T
Q214 2SC4178-F13F14-T
Q215 2SC4178-F13F14-T
Q216 2SC4178-F13F14-T
Q217 2SC4178-F13F14-T
IC203 TC4W53FU (TE12R)
IC204 TC7S08FU (TE85R)
Q218 2SA1611-T1M7
Q219 XN6501-TW
Q220 XN6501-TW
IC200 (3/4) TL064CPW-E05
IC300 (3/4) TL064CPW-E05
IC400 (3/4) TL064CPW-E05
IC303 TC4W53FU (TE12R)
IC304 TC7S08FU (TE85R)
IC403 TC4W53FU (TE12R)
IC404 TC7S08FU (TE85R)
5V
-5V
CN1 (54/100) R (X) OUT 54 PR. 2-16
CN1 (60/100) R FEED BACK IN 60 PR. 2-11
CN1 (53/100) R (G) OUT 53
CN1 (52/100) G (X) OUT 52 PR. 2-18
CN1 (59/100) G FEED BACK IN 59 PR. 2-10
CN1 (51/100) G (G) OUT 51
CN1 (50/100) B (X) OUT 50 PR. 2-14
CN1 (58/100) B FEED BACK IN 58 PR. 2-12
CN1 (49/100) B (G) OUT 49
CN1 (57/100) FB GND 57
+2.5V 16 2/2
NAM 15 2/2
1
2
3
4
5
I
J
K
L
M
N
O
P

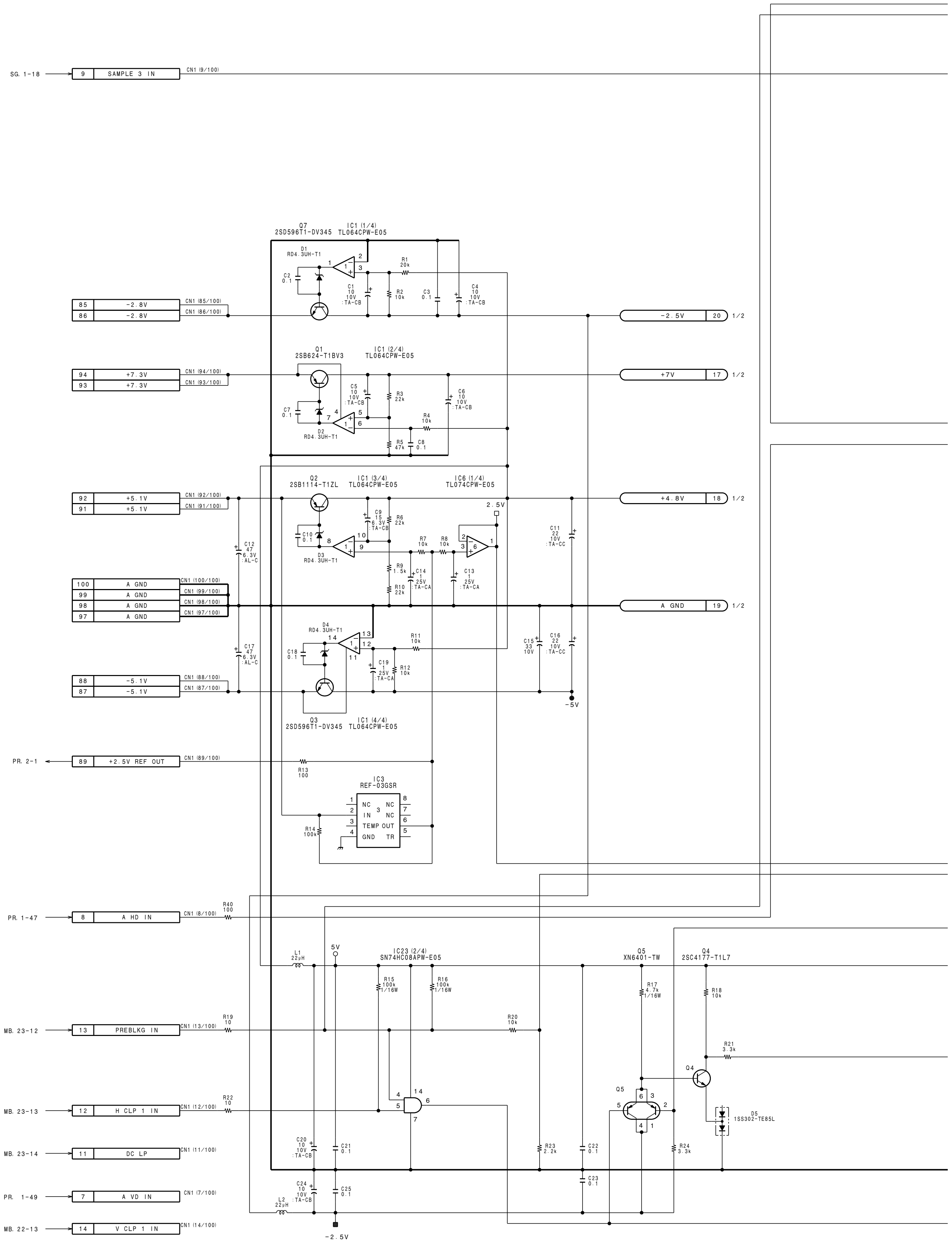
NOTE:
NM: NO MOUNT

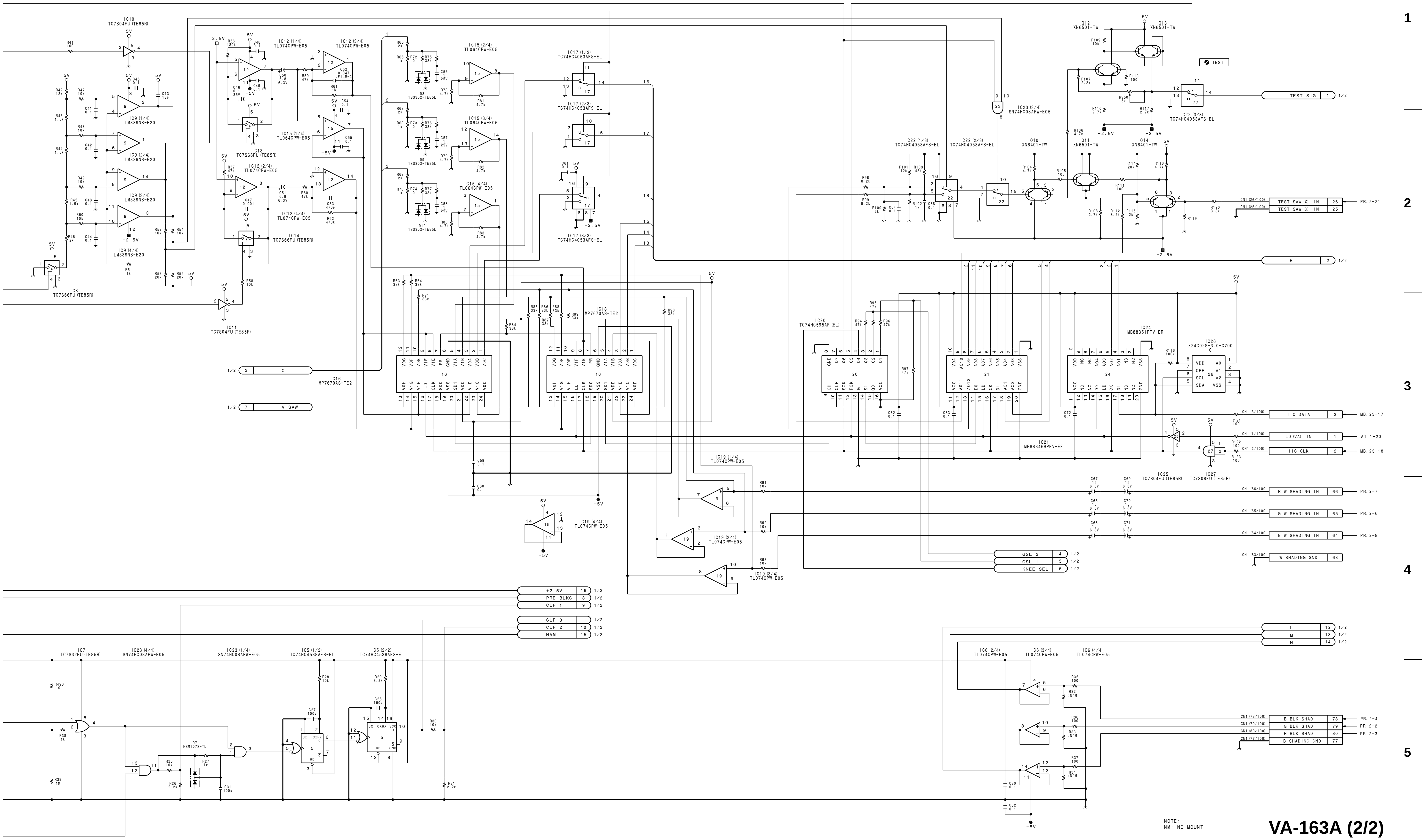
VA-163A (1/2)

BOARD NO. 1-657-438-21
LOT NO. 803-

9-3

1
2
3
4
5


SG. 1-18
9
SAMPLE 3 IN
CN1 (9/100)
Q7
2SD596T1-DV345
IC1 (1/4)
TL064CPW-E05
D1
RD4.3UH-T1
C2
0.1
C1
10
10V
:TA-CB
R1
20k
R2
10k
C3
0.1
C4
10
10V
:TA-CB
85
-2.8V
86
-2.8V
CN1 (85/100)
CN1 (86/100)
-2.5V
20
1/2
Q1
2SB624-T1BV3
IC1 (2/4)
TL064CPW-E05
94
+7.3V
93
+7.3V
CN1 (94/100)
CN1 (93/100)
+7V
17
1/2
C5
10
10V
:TA-CB
R3
22k
C6
10
10V
:TA-CB
C7
0.1
D2
RD4.3UH-T1
R4
10k
R5
47k
C8
0.1
Q2
2SB1114-T1ZL
IC1 (3/4)
TL064CPW-E05
IC6 (1/4)
TL074CPW-E05
92
+5.1V
91
+5.1V
CN1 (92/100)
CN1 (91/100)
+4.8V
18
1/2
2.5V
C9
15
6.3V
:TA-CB
R6
22k
C10
0.1
D3
RD4.3UH-T1
R7
10k
R8
10k
C12
47
6.3V
:AL-C
R9
1.5k
C14
1
25V
:TA-CA
R10
22k
C13
1
25V
:TA-CA
C11
22
10V
:TA-CC
100
99
98
97
A GND
CN1 (100/100)
CN1 (99/100)
CN1 (98/100)
CN1 (97/100)
A GND
19
1/2
D4
RD4.3UH-T1
C18
0.1
R11
10k
C17
47
6.3V
:AL-C
C19
1
25V
:TA-CA
R12
10k
C15
33
10V
C16
22
10V
:TA-CC
88
-5.1V
87
-5.1V
CN1 (88/100)
CN1 (87/100)
-5V
Q3
2SD596T1-DV345
IC1 (4/4)
TL064CPW-E05
PR. 2-1
89
+2.5V REF OUT
CN1 (89/100)
R13
100
IC3
REF-03GSR
NC
IN
TEMP OUT
GND
NC
NC
TR
R14
100k
PR. 1-47
8
A HD IN
CN1 (8/100)
R40
100
L1
22μH
5V
IC23 (2/4)
SN74HC08APW-E05
R15
100k
1/16W
R16
100k
1/16W
Q5
XN6401-TW
Q4
2SC4177-T1L7
R17
4.7k
1/16W
R18
10k
MB. 23-12
13
PREBLKG IN
CN1 (13/100)
R19
10
R20
10k
R21
3.3k
MB. 23-13
12
H CLP 1 IN
CN1 (12/100)
R22
10
D5
1SS302-TE85L
MB. 23-14
11
DC LP
CN1 (11/100)
C20
10
10V
:TA-CB
C21
0.1
R23
2.2k
C22
0.1
C23
0.1
R24
3.3k
PR. 1-49
7
A VD IN
CN1 (7/100)
L2
22μH
C24
10
10V
:TA-CB
C25
0.1
MB. 22-13
14
V CLP 1 IN
CN1 (14/100)
-2.5V


1
2
3
4
5
IC10 TC7S04FU (TE85R)
IC8 TC7S66FU (TE85R)
IC11 TC7S04FU (TE85R)
IC9 (1/4) LM339NS-E20
IC9 (2/4) LM339NS-E20
IC9 (3/4) LM339NS-E20
IC9 (4/4) LM339NS-E20
IC12 (1/4) TL074CPW-E05
IC12 (2/4) TL074CPW-E05
IC12 (3/4) TL074CPW-E05
IC12 (4/4) TL074CPW-E05
IC13 TC7S66FU (TE85R)
IC14 TC7S66FU (TE85R)
IC15 (1/4) TL064CPW-E05
IC15 (2/4) TL064CPW-E05
IC15 (3/4) TL064CPW-E05
IC15 (4/4) TL064CPW-E05
D8 1SS302-TE85L
D9 1SS302-TE85L
D10 1SS302-TE85L
IC16 MP7670AS-TE2
IC17 (1/3) TC74HC4053AFS-EL
IC17 (2/3) TC74HC4053AFS-EL
IC17 (3/3) TC74HC4053AFS-EL
IC18 MP7670AS-TE2
IC19 (1/4) TL074CPW-E05
IC19 (2/4) TL074CPW-E05
IC19 (3/4) TL074CPW-E05
IC19 (4/4) TL074CPW-E05
IC20 TC74HC595AF (EL)
IC21 MB88346BPFV-EF
IC22 (1/3) TC74HC4053AFS-EL
IC22 (2/3) TC74HC4053AFS-EL
IC22 (3/3) TC74HC4053AFS-EL
IC23 (3/4) SN74HC08APW-E05
IC24 MB88351PFV-ER
IC25 TC7S04FU (TE85R)
IC26 X24C02S-3.0-C700 0
IC27 TC7S08FU (TE85R)
Q10 XN6401-TW
Q11 XN6501-TW
Q12 XN6501-TW
Q13 XN6501-TW
Q14 XN6401-TW
RV50 5k
TEST
TEST SIG 1 1/2
CN1 (26/100) TEST SAW (X) IN 26 PR. 2-21
CN1 (25/100) TEST SAW (G) IN 25
B 2 1/2
C 3 1/2
V SAW 7 1/2
CN1 (3/100) IIC DATA 3 MB. 23-17
CN1 (1/100) LD (VA) IN 1 AT. 1-20
CN1 (2/100) IIC CLK 2 MB. 23-18
CN1 (66/100) R W SHADING IN 66 PR. 2-7
CN1 (65/100) G W SHADING IN 65 PR. 2-6
CN1 (64/100) B W SHADING IN 64 PR. 2-8
CN1 (63/100) W SHADING GND 63
GSL 2 4 1/2
GSL 1 5 1/2
KNEE SEL 6 1/2
+2.5V 16 1/2
PRE BLKG 8 1/2
CLP 1 9 1/2
CLP 3 11 1/2
CLP 2 10 1/2
NAM 15 1/2
L 12 1/2
M 13 1/2
N 14 1/2
IC7 TC7S32FU (TE85R)
IC23 (4/4) SN74HC08APW-E05
IC23 (1/4) SN74HC08APW-E05
IC5 (1/2) TC74HC4538AFS-EL
IC5 (2/2) TC74HC4538AFS-EL
D7 HSM107S-TL
IC6 (2/4) TL074CPW-E05
IC6 (3/4) TL074CPW-E05
IC6 (4/4) TL074CPW-E05
CN1 (78/100) B BLK SHAD 78 PR. 2-4
CN1 (79/100) G BLK SHAD 79 PR. 2-2
CN1 (80/100) R BLK SHAD 80 PR. 2-3
CN1 (77/100) B SHADING GND 77
5V
-5V
-2.5V
I
J
K
L
M
N
O
P

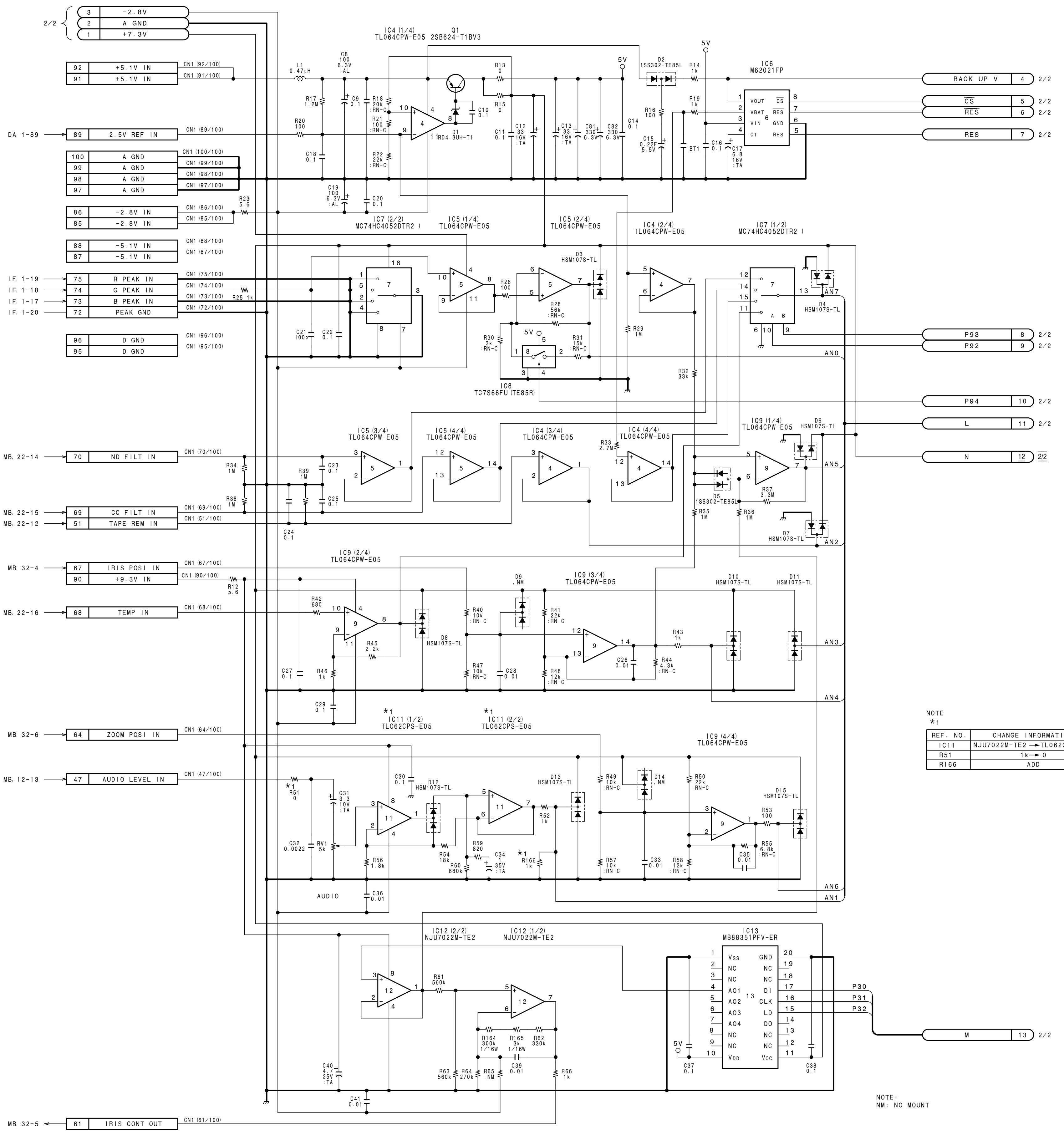
NOTE:
NM: NO MOUNT

VA-163A (2/2)

BOARD NO. 1-657-438-21
LOT NO. 803-

http://getMANUAL.com

BVP-570 (SY)


2/2
3 -2.8V
2 A GND
1 +7.3V
92 +5.1V IN
91 +5.1V IN
DA. 1-89
89 2.5V REF IN
100 A GND
99 A GND
98 A GND
97 A GND
86 -2.8V IN
85 -2.8V IN
88 -5.1V IN
87 -5.1V IN
IF. 1-19
IF. 1-18
IF. 1-17
IF. 1-20
75 R PEAK IN
74 G PEAK IN
73 B PEAK IN
72 PEAK GND
96 D GND
95 D GND
MB. 22-14
70 ND FILT IN
MB. 22-15
69 CC FILT IN
MB. 22-12
51 TAPE REM IN
MB. 32-4
67 IRIS POSI IN
90 +9.3V IN
MB. 22-16
68 TEMP IN
MB. 32-6
64 ZOOM POSI IN
MB. 12-13
47 AUDIO LEVEL IN
MB. 32-5
61 IRIS CONT OUT
IC4 (1/4) TL064CPW-E05
Q1 2SB624-T1BV3
IC6 M62021FP
D2 1SS302-TE85L
D1 SUH-T1
BACK UP V 4 2/2
CS 5 2/2
RES 6 2/2
RES 7 2/2
IC7 (2/2) MC74HC4052DTR2
IC5 (1/4) TL064CPW-E05
IC5 (2/4) TL064CPW-E05
IC4 (2/4) TL064CPW-E05
IC7 (1/2) MC74HC4052DTR2
D3 HSM107S-TL
D4 HSM107S-TL
IC8 TC7S66FU (TE85R)
P93 8 2/2
P92 9 2/2
AN0
AN7
P94 10 2/2
L 11 2/2
N 12 2/2
IC5 (3/4) TL064CPW-E05
IC5 (4/4) TL064CPW-E05
IC4 (3/4) TL064CPW-E05
IC4 (4/4) TL064CPW-E05
IC9 (1/4) TL064CPW-E05
D5 1SS302-TE85L
D6 HSM107S-TL
D7 HSM107S-TL
AN5
AN2
IC9 (2/4) TL064CPW-E05
IC9 (3/4) TL064CPW-E05
D8 HSM107S-TL
D9 NM
D10 HSM107S-TL
D11 HSM107S-TL
AN3
AN4
*1 IC11 (1/2) TL062CPS-E05
*1 IC11 (2/2) TL062CPS-E05
IC9 (4/4) TL064CPW-E05
D12 HSM107S-TL
D13 HSM107S-TL
D14 NM
D15 HSM107S-TL
AUDIO
AN6
AN1
IC12 (2/2) NJU7022M-TE2
IC12 (1/2) NJU7022M-TE2
IC13 MB88351PFV-ER
P30
P31
P32
M 13 2/2
5V

NOTE
*1

REF. NO.	CHANGE INFORMATION	SERIAL NO.
IC11	NJU7022M-TE2 → TL062CPS-E05	15331- (BVP-570) 55111- (BVP-570WSPK)
R51	1k → 0	
R166	ADD	

NOTE:
NM: NO MOUNT

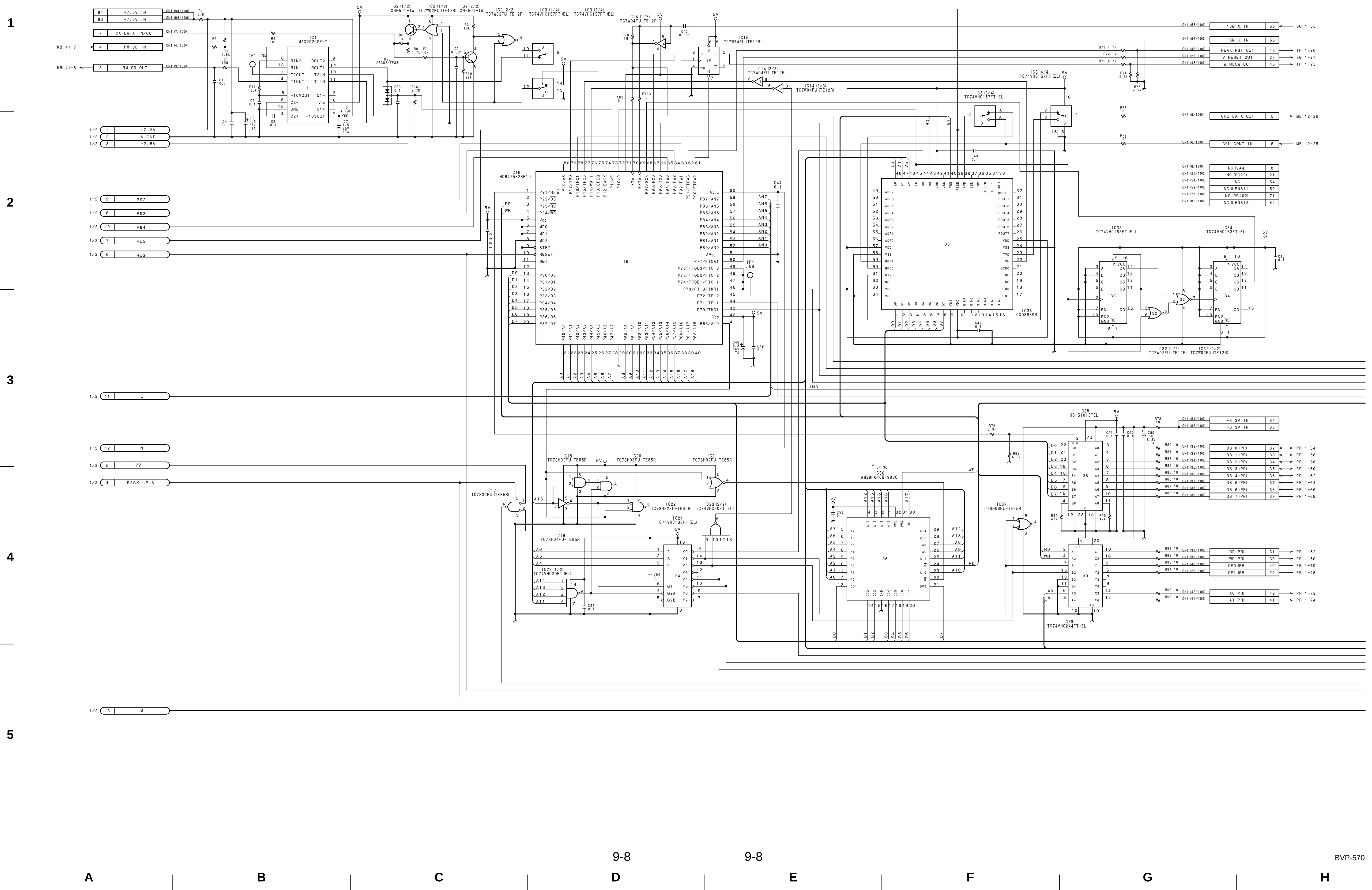
AT-126 (1/2)

BOARD NO. 1-670-466-11
LOT NO. 803-
B-¥BKP5090-AT126-11

AT-126 (2/2)

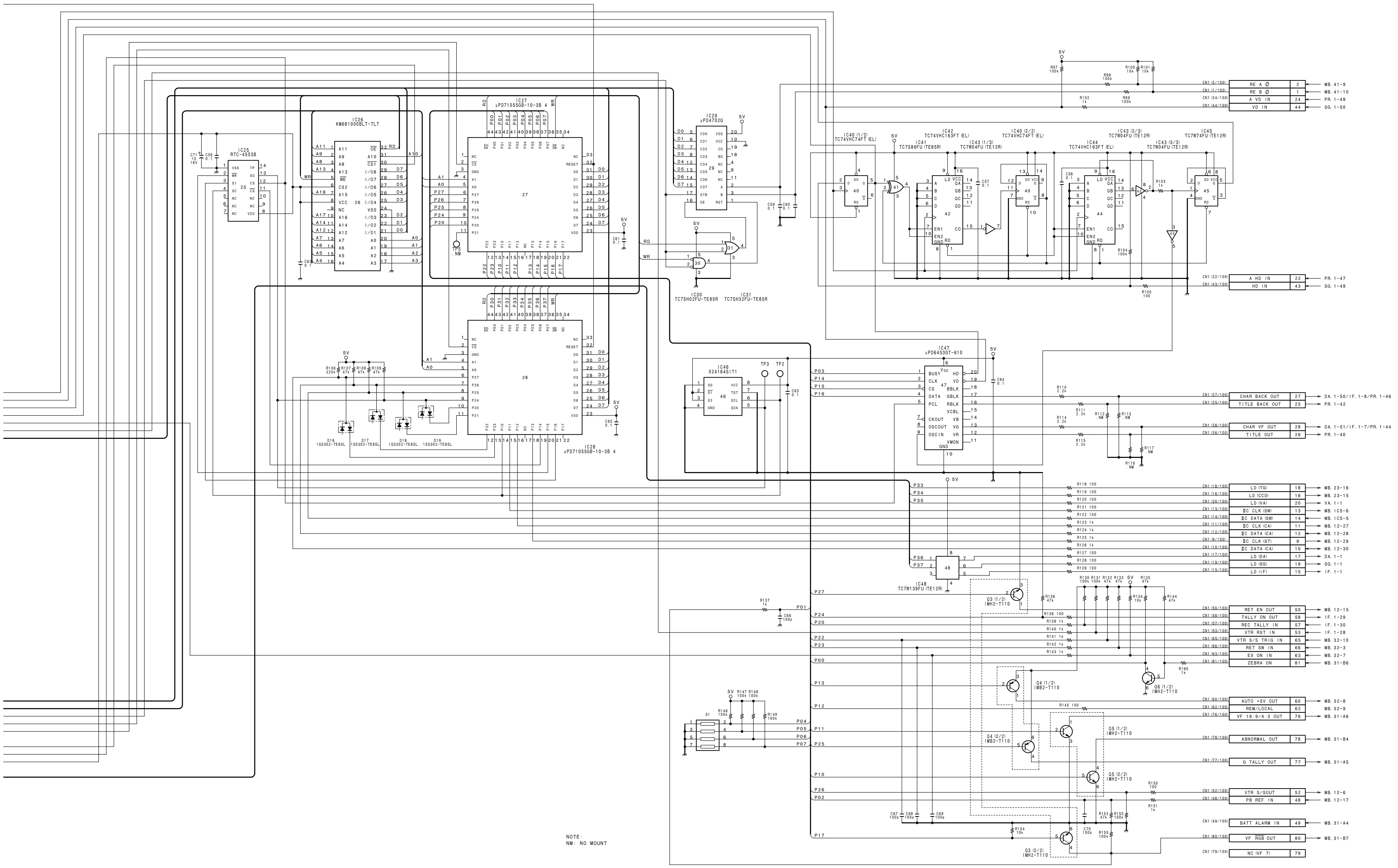
AT-126 (2/2)

BVP-570 (SY)



1
2
3
4
5
A
B
C
D
E
F
G
H
94 +7.5V IN CN1 (94/100)
93 +7.5V IN CN1 (93/100)
7 CA DATA IN/OUT CN1 (7/100)
MB. 41-7 4 RM SD IN CN1 (4/100)
MB. 41-8 3 RM SD OUT CN1 (3/100)
IC1 MAX202CSE-T
TP1 NM
Q2 (1/2) XN6501-TW
IC2 (1/2) TC7W02FU (TE12R)
Q2 (2/2) XN6501-TW
IC2 (2/2) TC7W02FU (TE12R)
IC3 (1/4) TC74VHC157FT (EL)
IC3 (2/4) TC74VHC157FT (EL)
IC3 (3/4) TC74VHC157FT (EL)
IC3 (4/4) TC74VHC157FT (EL)
D20 1SS302-TE85L
IC14 (1/3) TC7W04FU (TE12R)
IC14 (2/3) TC7W04FU (TE12R)
IC14 (3/3) TC7W04FU (TE12R)
IC15 TC7W74FU (TE12R)
5V
1/2 1 +7.3V
1/2 2 A GND
1/2 3 -2.8V
1/2 9 P92
1/2 8 P93
1/2 10 P94
1/2 7 RES
1/2 6 RES
1/2 11 L
1/2 12 N
1/2 5 CS
1/2 4 BACK UP V
1/2 13 M
IC16 HD6475328F10
TP4 NM
AN3
IC35 CXD8889R
IC33 TC74VHC163FT (EL)
IC34 TC74VHC163FT (EL)
IC32 (1/2) TC7W02FU (TE12R)
IC32 (2/2) TC7W02FU (TE12R)
CN1 (55/100) 18M (X) IN 55 SG. 1-55
CN1 (56/100) 18M (G) IN 56
CN1 (46/100) PEAK RST OUT 46 IF. 1-26
CN1 (23/100) V RESET OUT 23 SG. 1-21
CN1 (45/100) WINDOW OUT 45 IF. 1-25
CN1 (5/100) CHU DATA OUT 5 MB. 12-26
CN1 (6/100) CCU CONT IN 6 MB. 12-25
CN1 (8/100) NC (VA4) 8
CN1 (21/100) NC (SG22) 21
CN1 (54/100) NC 54
CN1 (59/100) NC (LENS11) 59
CN1 (71/100) NC (PR102) 71
CN1 (82/100) NC (LENS12) 82
IC38 HD151015TEL
CN1 (84/100) +3.3V IN 84
CN1 (83/100) +3.3V IN 83
CN1 (32/100) DB 0 (PR) 32 PR. 1-54
CN1 (33/100) DB 1 (PR) 33 PR. 1-56
CN1 (34/100) DB 2 (PR) 34 PR. 1-58
CN1 (35/100) DB 3 (PR) 35 PR. 1-60
CN1 (36/100) DB 4 (PR) 36 PR. 1-62
CN1 (37/100) DB 5 (PR) 37 PR. 1-64
CN1 (38/100) DB 6 (PR) 38 PR. 1-66
CN1 (39/100) DB 7 (PR) 39 PR. 1-68
CN1 (31/100) RD (PR) 31 PR. 1-52
CN1 (30/100) WR (PR) 30 PR. 1-50
CN1 (40/100) CE0 (PR) 40 PR. 1-70
CN1 (29/100) CE1 (PR) 29 PR. 1-48
CN1 (42/100) A0 (PR) 42 PR. 1-72
CN1 (41/100) A1 (PR) 41 PR. 1-74
* CN136
IC36 AM29F040B-90JC
IC37 TC7SH08FU-TE85R
IC39 TC74VHC244FT (EL)
IC18 TC7SH02FU-TE85R
IC20 TC7SH08FU-TE85R
IC21 TC7SH02FU-TE85R
IC17 TC7S32FU (TE85R)
IC19 TC7SH04FU-TE85R
IC22 TC7SH32FU-TE85R
IC23 (1/2) TC74VHC20FT (EL)
IC23 (2/2) TC74VHC20FT (EL)
IC24 TC74VHC138FT (EL)

AT-126 (2/2)


1
2
3
4
5
IC25 RTC-4553B
IC26 KM681000BLT-7LT
IC27 μPD71055GB-10-3B 4
IC28 μPD71055GB-10-3B 4
IC29 μPD4702G
IC30 TC7SH02FU-TE85R
IC31 TC7SH32FU-TE85R
IC40 (1/2) TC74VHC74FT (EL)
IC40 (2/2) TC74VHC74FT (EL)
IC41 TC7S86FU (TE85R)
IC42 TC74VHC163FT (EL)
IC43 (1/3) TC7W04FU (TE12R)
IC43 (2/3) TC7W04FU (TE12R)
IC43 (3/3) TC7W04FU (TE12R)
IC44 TC74VHC163FT (EL)
IC45 TC7W74FU (TE12R)
IC46 X24164SIT1
IC47 μPD6453GT-610
IC48 TC7W139FU (TE12R)
D16 1SS302-TE85L
D17 1SS302-TE85L
D18 1SS302-TE85L
D19 1SS302-TE85L
Q3 (1/2) IMH2-T110
Q3 (2/2) IMH2-T110
Q4 (1/2) IMB2-T110
Q4 (2/2) IMB2-T110
Q5 (1/2) IMH2-T110
Q5 (2/2) IMH2-T110
Q6 (1/2) IMH2-T110
S1
TP1 NM
TP2
TP3
5V
RE A Ø 2 MB. 41-9
RE B Ø 1 MB. 41-10
A VD IN 24 PR. 1-49
VD IN 44 SG. 1-50
A HD IN 22 PR. 1-47
HD IN 43 SG. 1-49
CHAR BACK OUT 27 DA. 1-50/IF. 1-8/PR. 1-46
TITLE BACK OUT 25 PR. 1-42
CHAR VF OUT 28 DA. 1-51/IF. 1-7/PR. 1-44
TITLE OUT 26 PR. 1-40
LD (TG) 18 MB. 23-16
LD (CCD) 16 MB. 23-15
LD (VA) 20 VA. 1-1
I2C CLK (SW) 13 MB. IC5-6
I2C DATA (SW) 14 MB. IC5-5
I2C CLK (CA) 11 MB. 12-27
I2C DATA (CA) 12 MB. 12-28
I2C CLK (ST) 9 MB. 12-29
I2C DATA (CA) 10 MB. 12-30
LD (DA) 17 DA. 1-1
LD (SG) 19 SG. 1-1
LD (IF) 15 IF. 1-1
RET EN OUT 50 MB. 12-15
TALLY ON OUT 58 IF. 1-29
REC TALLY IN 57 IF. 1-30
VTR RST IN 53 IF. 1-28
VTR S/S TRIG IN 65 MB. 32-10
RET SW IN 66 MB. 32-3
EX ON IN 63 MB. 32-7
ZEBRA ON 81 MB. 31-B6
AUTO +5V OUT 60 MB. 32-8
REM/LOCAL 62 MB. 32-9
VF 16:9/4:3 OUT 76 MB. 31-A6
ABNORMAL OUT 78 MB. 31-B4
G TALLY OUT 77 MB. 31-A5
VTR S/SOUT 52 MB. 12-6
PB REF IN 48 MB. 12-17
BATT ALARM IN 49 MB. 31-A4
VF RGB OUT 80 MB. 31-B7
NC (VF 7) 79
NOTE:
NM: NO MOUNT

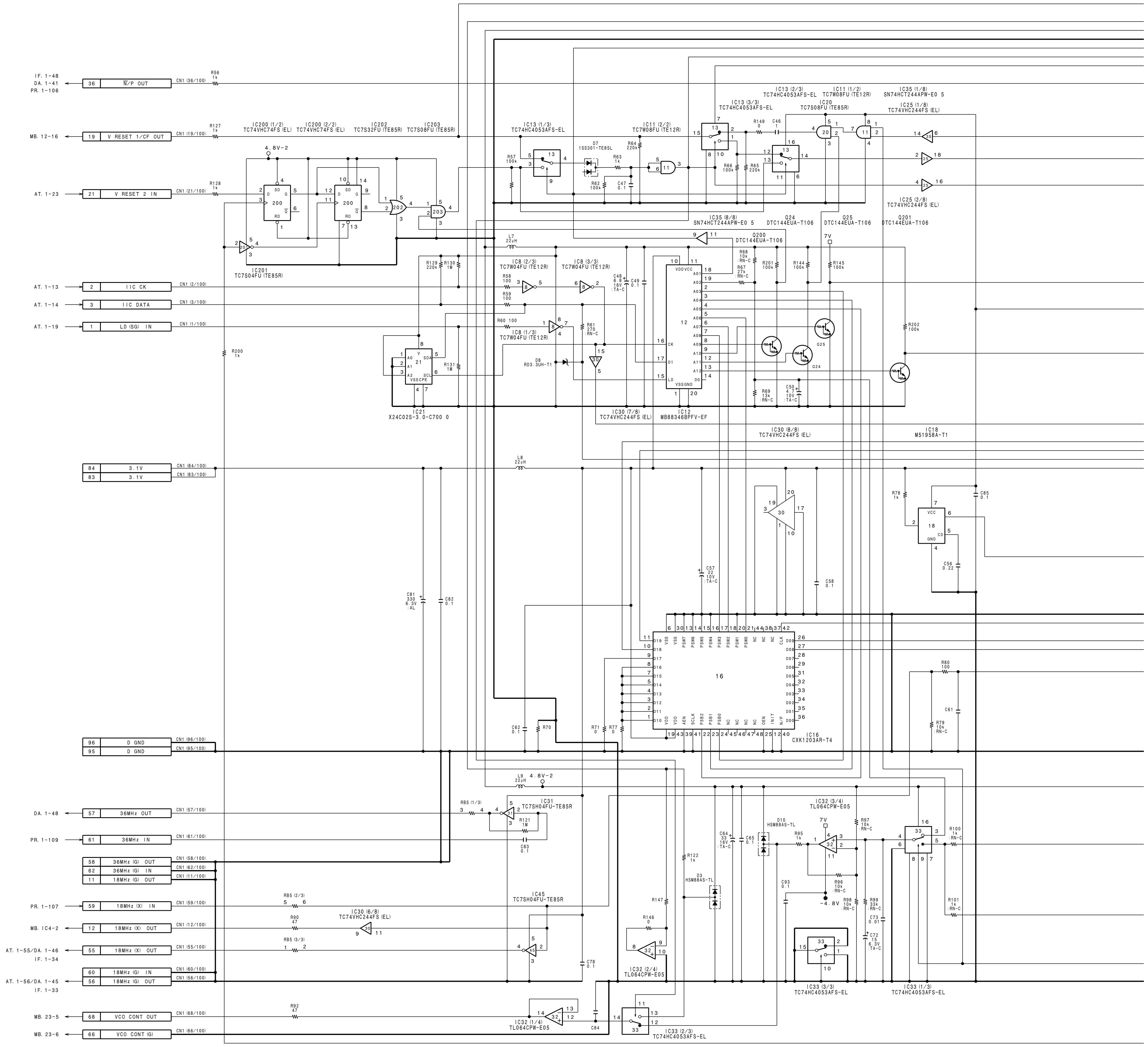
I
J
K
L
M
N
O
P

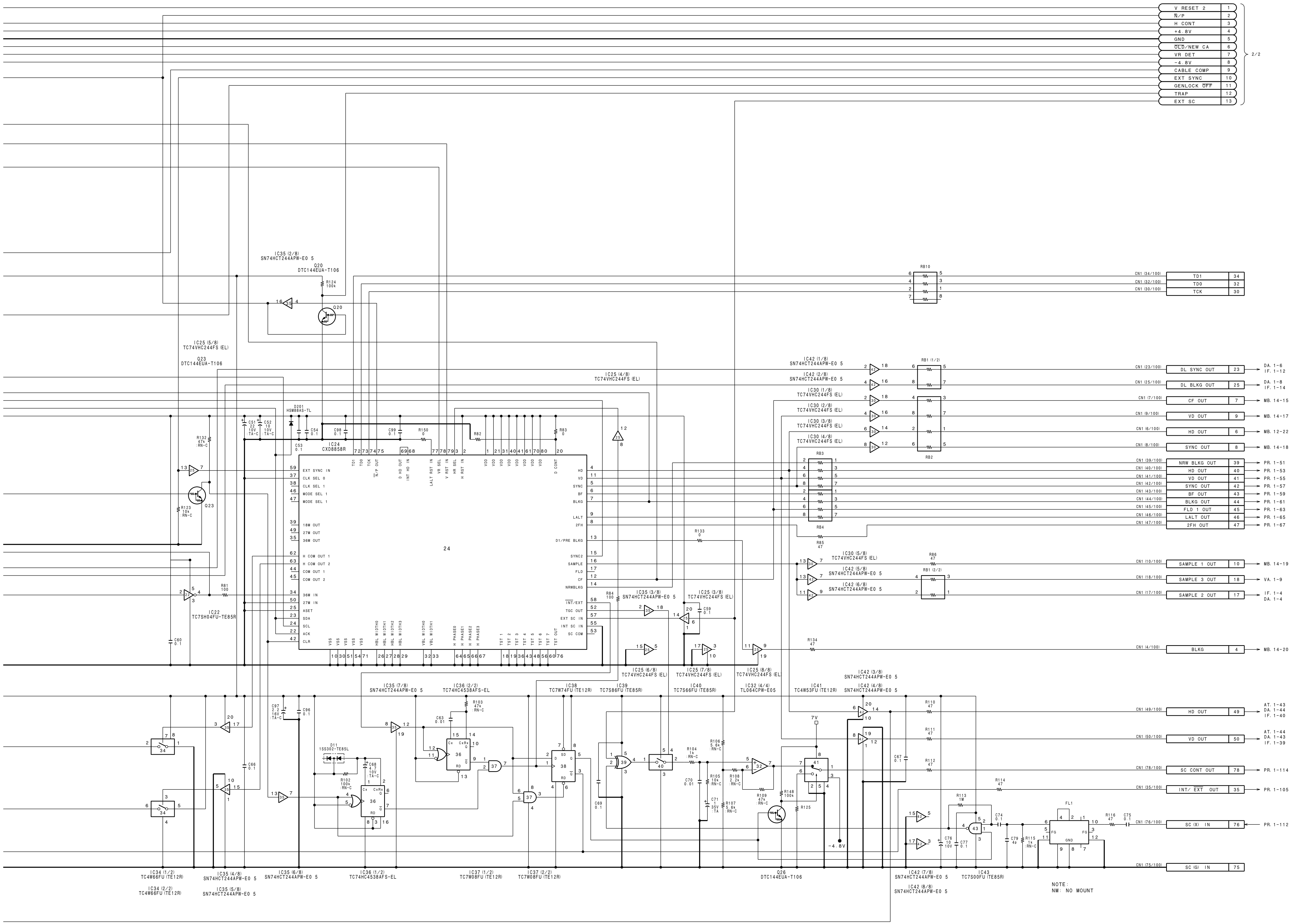
AT-126 (2/2)

BOARD NO. 1-670-466-11
LOT NO. 803-
B-¥BKP5090-AT126-11

9-9

BVP-570 (SY)


IF. 1-48
DA. 1-41
PR. 1-106
36 N/P OUT
CN1 (36/100)
R56 1k
MB. 12-16
19 V RESET 1/CF OUT
CN1 (19/100)
AT. 1-23
21 V RESET 2 IN
CN1 (21/100)
AT. 1-13
2 IIC CK
AT. 1-14
3 IIC DATA
AT. 1-19
1 LD (SG) IN
84 3.1V
83 3.1V
96 D GND
95 D GND
DA. 1-48
57 36MHz OUT
PR. 1-109
61 36MHz IN
58 36MHz (G) OUT
62 36MHz (G) IN
11 18MHz (G) OUT
PR. 1-107
59 18MHz (X) IN
MB. IC4-2
12 18MHz (X) OUT
AT. 1-55/DA. 1-46
IF. 1-34
55 18MHz (X) OUT
60 18MHz (G) IN
AT. 1-56/DA. 1-45
IF. 1-33
56 18MHz (G) OUT
MB. 23-5
68 VCO CONT OUT
MB. 23-6
66 VCO CONT (G)
4.8V-2
IC200 (1/2) TC74VHC74FS (EL)
IC200 (2/2) TC74VHC74FS (EL)
IC202 TC7S32FU (TE85R)
IC203 TC7S08FU (TE85R)
IC201 TC7S04FU (TE85R)
IC13 (1/3) TC74HC4053AFS-EL
D7 1SS301-TE85L
IC11 (2/2) TC7W08FU (TE12R)
IC13 (3/3) TC74HC4053AFS-EL
IC13 (2/3) TC74HC4053AFS-EL
IC11 (1/2) TC7W08FU (TE12R)
IC20 TC7S08FU (TE85R)
IC35 (1/8) SN74HCT244APW-E0 5
IC25 (1/8) TC74VHC244FS (EL)
IC25 (2/8) TC74VHC244FS (EL)
IC35 (8/8) SN74HCT244APW-E0 5
Q24 DTC144EUA-T106
Q25 DTC144EUA-T106
Q201 DTC144EUA-T106
Q200 DTC144EUA-T106
L7 22uH
IC8 (2/3) TC7W04FU (TE12R)
IC8 (3/3) TC7W04FU (TE12R)
IC8 (1/3) TC7W04FU (TE12R)
D8 RD3.3UH-T1
IC21 X24C02S-3.0-C700 0
IC30 (7/8) TC74VHC244FS (EL)
IC12 MB88346BPFV-EF
IC30 (8/8) TC74VHC244FS (EL)
IC18 M51958A-T1
L8 22uH
IC16 CXK1203AR-T4
L9 22uH
IC31 TC7SH04FU-TE85R
IC45 TC7SH04FU-TE85R
IC30 (6/8) TC74VHC244FS (EL)
D10 HSM88AS-TL
D3 HSM88AS-TL
IC32 (3/4) TL064CPW-E05
IC32 (2/4) TL064CPW-E05
IC32 (1/4) TL064CPW-E05
IC33 (3/3) TC74HC4053AFS-EL
IC33 (1/3) TC74HC4053AFS-EL
IC33 (2/3) TC74HC4053AFS-EL
7V
-4.8V
1
2
3
4
5
A
B
C
D
E
F
G
H


V RESET 2
N/P
H CONT
+4.8V
GND
OLD/NEW CA
VR DET
-4.8V
CABLE COMP
EXT SYNC
GENLOCK OFF
TRAP
EXT SC
2/2
TDI
TDO
TCK
RB10
IC35 (2/8)
SN74HCT244APW-E0 5
Q20
DTC144EUA-T106
IC25 (5/8)
TC74VHC244FS (EL)
Q23
DTC144EUA-T106
IC24
CXD8858R
D201
HSM88AS-TL
IC25 (4/8)
TC74VHC244FS (EL)
IC42 (1/8)
SN74HCT244APW-E0 5
IC42 (2/8)
IC30 (1/8)
TC74VHC244FS (EL)
IC30 (2/8)
IC30 (3/8)
IC30 (4/8)
RB1 (1/2)
RB2
RB3
RB4
DL SYNC OUT
DL BLKG OUT
CF OUT
VD OUT
HD OUT
SYNC OUT
NRW BLKG OUT
BF OUT
BLKG OUT
FLD 1 OUT
LALT OUT
2FH OUT
DA. 1-6
IF. 1-12
DA. 1-8
IF. 1-14
MB. 14-15
MB. 14-17
MB. 12-22
MB. 14-18
PR. 1-51
PR. 1-53
PR. 1-55
PR. 1-57
PR. 1-59
PR. 1-61
PR. 1-63
PR. 1-65
PR. 1-67
IC30 (5/8)
IC42 (5/8)
IC42 (6/8)
RB1 (2/2)
SAMPLE 1 OUT
SAMPLE 3 OUT
SAMPLE 2 OUT
MB. 14-19
VA. 1-9
IF. 1-4
DA. 1-4
IC22
TC7SH04FU-TE85R
IC35 (3/8)
IC25 (3/8)
IC25 (6/8)
IC25 (7/8)
IC25 (8/8)
BLKG
MB. 14-20
IC35 (7/8)
IC36 (2/2)
TC74HC4538AFS-EL
IC38
TC7W74FU (TE12R)
IC39
TC7S86FU (TE85R)
IC40
TC7S66FU (TE85R)
IC32 (4/4)
TL064CPW-E05
IC41
TC4W53FU (TE12R)
IC42 (3/8)
IC42 (4/8)
D11
1SS302-TE85L
HD OUT
VD OUT
SC CONT OUT
INT/ EXT OUT
SC (X) IN
SC (G) IN
AT. 1-43
DA. 1-44
IF. 1-40
AT. 1-44
DA. 1-43
IF. 1-39
PR. 1-114
PR. 1-105
PR. 1-112
FL1
7V
-4.8V
IC34 (1/2)
TC4W66FU (TE12R)
IC34 (2/2)
IC35 (4/8)
IC35 (5/8)
IC35 (6/8)
IC36 (1/2)
IC37 (1/2)
TC7W08FU (TE12R)
IC37 (2/2)
Q26
DTC144EUA-T106
IC42 (7/8)
IC42 (8/8)
IC43
TC7S00FU (TE85R)
NOTE:
NM: NO MOUNT
1
2
3
4
5
I
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K
L
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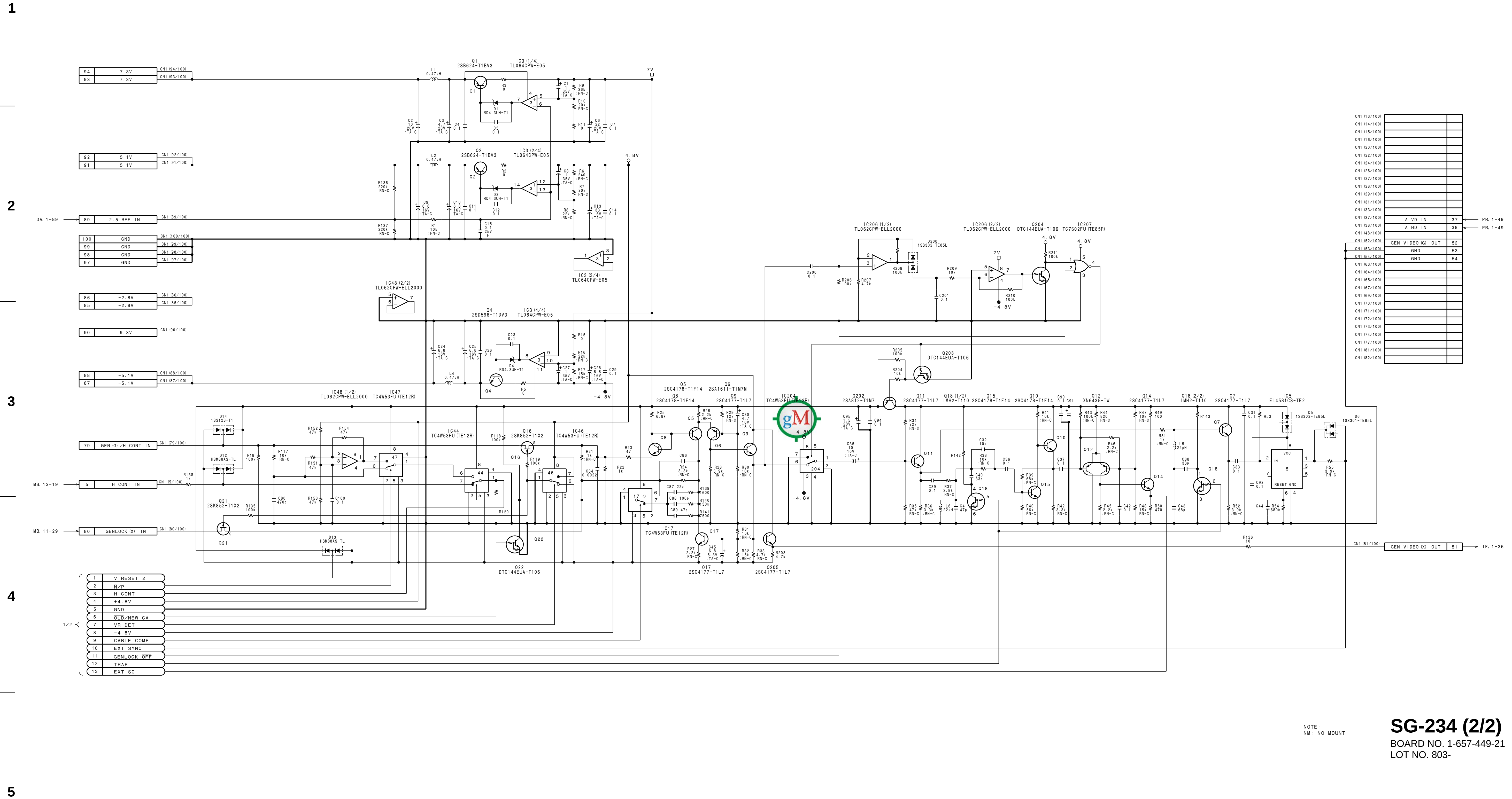
P

SG-234 (1/2)

BOARD NO. 1-657-449-21
LOT NO. 803-

SG-234 (2/2)

BVP-570 (SY)


1
2
3
4
5
94 7.3V CN1 (94/100)
93 7.3V CN1 (93/100)
92 5.1V CN1 (92/100)
91 5.1V CN1 (91/100)
DA. 1-89
89 2.5 REF IN CN1 (89/100)
100 GND CN1 (100/100)
99 GND CN1 (99/100)
98 GND CN1 (98/100)
97 GND CN1 (97/100)
86 -2.8V CN1 (86/100)
85 -2.8V CN1 (85/100)
90 9.3V CN1 (90/100)
88 -5.1V CN1 (88/100)
87 -5.1V CN1 (87/100)
79 GEN (G) /H CONT IN CN1 (79/100)
MB. 12-19
5 H CONT IN CN1 (5/100)
MB. 11-29
80 GENLOCK (X) IN CN1 (80/100)
1/2
1 V RESET 2
2 N/P
3 H CONT
4 +4.8V
5 GND
6 OLD/NEW CA
7 VR DET
8 -4.8V
9 CABLE COMP
10 EXT SYNC
11 GENLOCK OFF
12 TRAP
13 EXT SC
Q1 2SB624-T1BV3
IC3 (1/4) TL064CPW-E05
Q2 2SB624-T1BV3
IC3 (2/4) TL064CPW-E05
IC3 (3/4) TL064CPW-E05
Q4 2SD596-T1DV3
IC3 (4/4) TL064CPW-E05
IC48 (2/2) TL062CPW-ELL2000
IC48 (1/2) TL062CPW-ELL2000
IC47 TC4W53FU (TE12R)
IC44 TC4W53FU (TE12R)
Q16 2SK852-T1X2
IC46 TC4W53FU (TE12R)
Q21 2SK852-T1X2
Q22 DTC144EUA-T106
D14 1SS123-T1
D12 HSM88AS-TL
D13 HSM88AS-TL
Q5 2SC4178-T1F14
Q6 2SA1611-T1M7M
Q8 2SC4178-T1F14
Q9 2SC4177-T1L7
IC17 TC4W53FU (TE12R)
Q17 2SC4177-T1L7
Q205 2SC4177-T1L7
IC204 TC4W53FU (TE12R)
Q202 2SA812-T1M7
Q203 DTC144EUA-T106
IC206 (1/2) TL062CPW-ELL2000
D200 1SS302-TE85L
IC206 (2/2) TL062CPW-ELL2000
Q204 DTC144EUA-T106
IC207 TC7S02FU (TE85R)
Q11 2SC4177-T1L7
Q18 (1/2) IMH2-T110
Q15 2SC4178-T1F14
Q10 2SC4178-T1F14
Q12 XN6435-TW
Q14 2SC4177-T1L7
Q18 (2/2) IMH2-T110
Q7 2SC4177-T1L7
IC5 EL4581CS-TE2
D5 1SS302-TE85L
D6 1SS301-TE85L
7V
4.8V
-4.8V
CN1 (13/100)
CN1 (14/100)
CN1 (15/100)
CN1 (16/100)
CN1 (20/100)
CN1 (22/100)
CN1 (24/100)
CN1 (26/100)
CN1 (27/100)
CN1 (28/100)
CN1 (29/100)
CN1 (31/100)
CN1 (33/100)
CN1 (37/100) A VD IN 37 PR. 1-49
CN1 (38/100) A HD IN 38 PR. 1-49
CN1 (48/100)
CN1 (52/100) GEN VIDEO (G) OUT 52
CN1 (53/100) GND 53
CN1 (54/100) GND 54
CN1 (63/100)
CN1 (64/100)
CN1 (65/100)
CN1 (67/100)
CN1 (69/100)
CN1 (70/100)
CN1 (71/100)
CN1 (72/100)
CN1 (73/100)
CN1 (74/100)
CN1 (77/100)
CN1 (81/100)
CN1 (82/100)
CN1 (51/100) GEN VIDEO (X) OUT 51 IF. 1-36
A
B
C
D
E
F
G
H

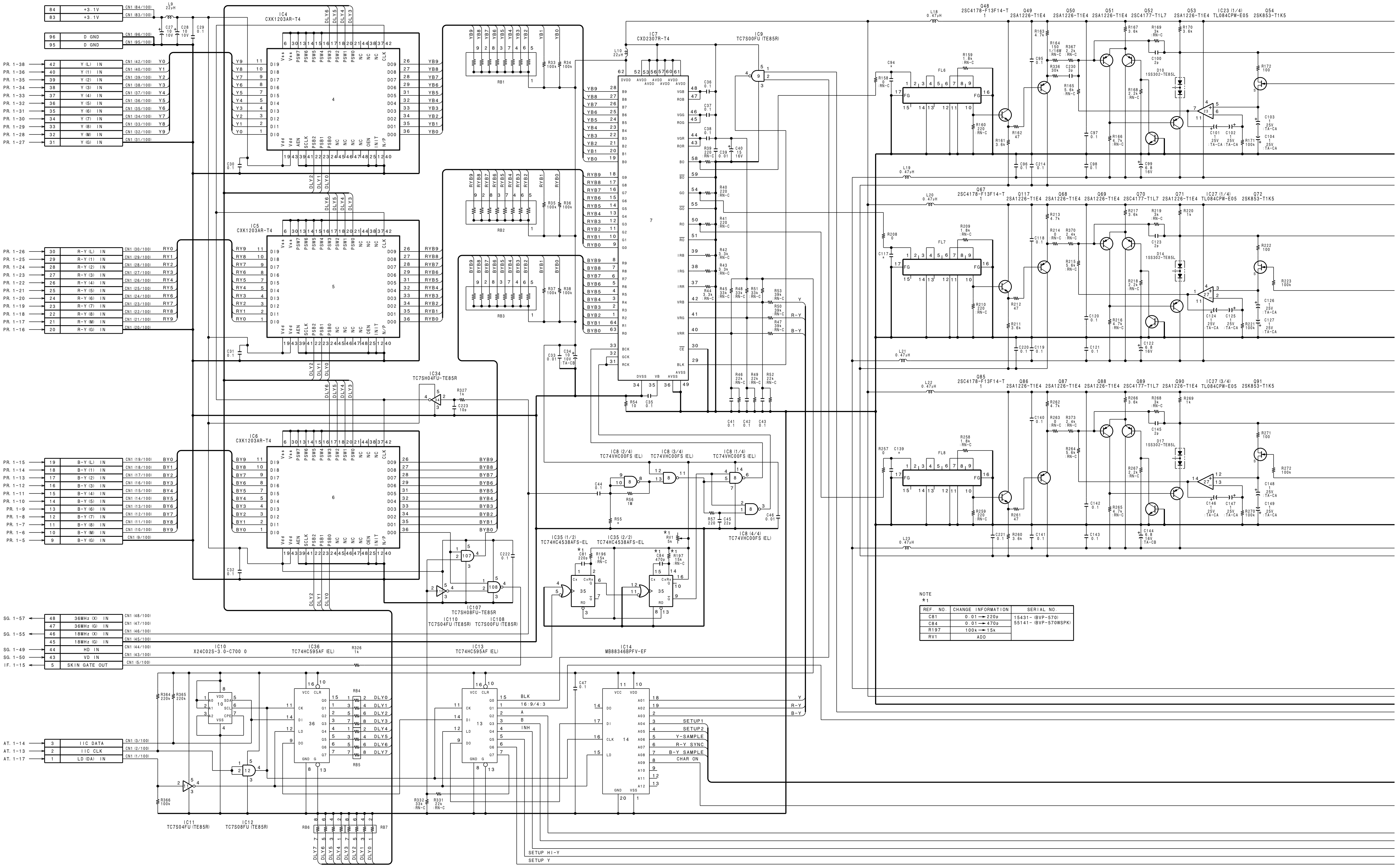
NOTE:
NM: NO MOUNT

SG-234 (2/2)

BOARD NO. 1-657-449-21
LOT NO. 803-

9-12

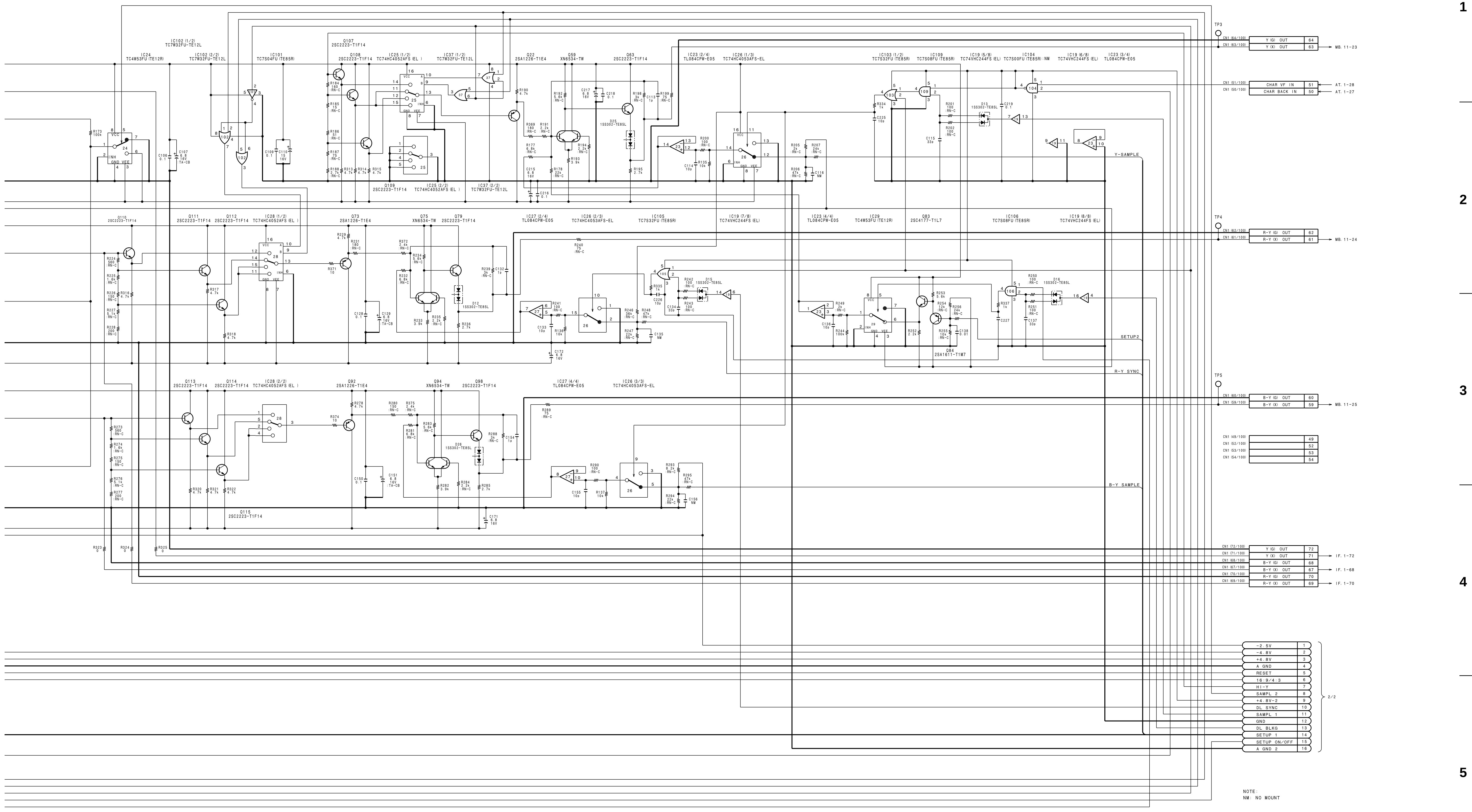
BVP-570 (SY)


1
2
3
4
5
IC4 CXK1203AR-T4
IC5 CXK1203AR-T4
IC6 CXK1203AR-T4
IC7 CXD2307R-T4
IC9 TC7S00FU (TE85R)
IC34 TC7SH04FU-TE85R
IC8 (2/4) TC74VHC00FS (EL)
IC8 (3/4) TC74VHC00FS (EL)
IC8 (1/4) TC74VHC00FS (EL)
IC8 (4/4) TC74VHC00FS (EL)
IC35 (1/2) TC74HC4538AFS-EL
IC35 (2/2) TC74HC4538AFS-EL
IC107 TC7SH08FU-TE85R
IC110 TC7S04FU (TE85R)
IC108 TC7S00FU (TE85R)
IC10 X24C02S-3.0-C700 0
IC36 TC74HC595AF (EL)
IC13 TC74HC595AF (EL)
IC14 MB88346BPFV-EF
IC11 TC7S04FU (TE85R)
IC12 TC7S08FU (TE85R)
Q48 2SC4178-F13F14-T
Q49 2SA1226-T1E4
Q50 2SA1226-T1E4
Q51 2SA1226-T1E4
Q52 2SC4177-T1L7
Q53 2SA1226-T1E4
IC23 (1/4) TL084CPW-E05
Q54 2SK853-T1K5
Q67 2SC4178-F13F14-T
Q117 2SA1226-T1E4
Q68 2SA1226-T1E4
Q69 2SA1226-T1E4
Q70 2SC4177-T1L7
Q71 2SA1226-T1E4
IC27 (1/4) TL084CPW-E05
Q72 2SK853-T1K5
Q85 2SC4178-F13F14-T
Q86 2SA1226-T1E4
Q87 2SA1226-T1E4
Q88 2SA1226-T1E4
Q89 2SC4177-T1L7
Q90 2SA1226-T1E4
IC27 (3/4) TL084CPW-E05
Q91 2SK853-T1K5
FL6
FL7
FL8
RB1
RB2
RB3
RB4
RB5
RB6
RB7
+3.1V
D GND
Y (L) IN
R-Y (L) IN
B-Y (L) IN
36MHz (X) IN
36MHz (G) IN
18MHz (X) IN
18MHz (G) IN
HD IN
VD IN
SKIN GATE OUT
IIC DATA
IIC CLK
LD (DA) IN
SETUP HI-Y
SETUP Y
SETUP1
SETUP2
Y-SAMPLE
R-Y SYNC
B-Y SAMPLE
CHAR ON
BLK
16:9/4:3
INH

NOTE

*1

REF. NO.	CHANGE INFORMATION	SERIAL NO.
C81	0.01 → 220p	15431- (BVP-570) 55141- (BVP-570WSPK)
C84	0.01 → 470p	
R197	100k → 15k	
RV1	ADD	


TP3
TP4
TP5
Y (G) OUT 64
Y (X) OUT 63
MB. 11-23
CHAR VF IN 51
CHAR BACK IN 50
AT. 1-28
AT. 1-27
R-Y (G) OUT 62
R-Y (X) OUT 61
MB. 11-24
B-Y (G) OUT 60
B-Y (X) OUT 59
MB. 11-25
Y (G) OUT 72
Y (X) OUT 71
B-Y (G) OUT 68
B-Y (X) OUT 67
R-Y (G) OUT 70
R-Y (X) OUT 69
IF. 1-72
IF. 1-68
IF. 1-70
Y-SAMPLE
SETUP2
R-Y SYNC
B-Y SAMPLE
-2.5V 1
-4.8V 2
+4.8V 3
A GND 4
RESET 5
16:9/4:3 6
HI-Y 7
SAMPL 2 8
+4.8V-2 9
DL SYNC 10
SAMPL 1 11
GND 12
DL BLKG 13
SETUP 1 14
SETUP ON/OFF 15
A GND 2 16
2/2
1
2
3
4
5

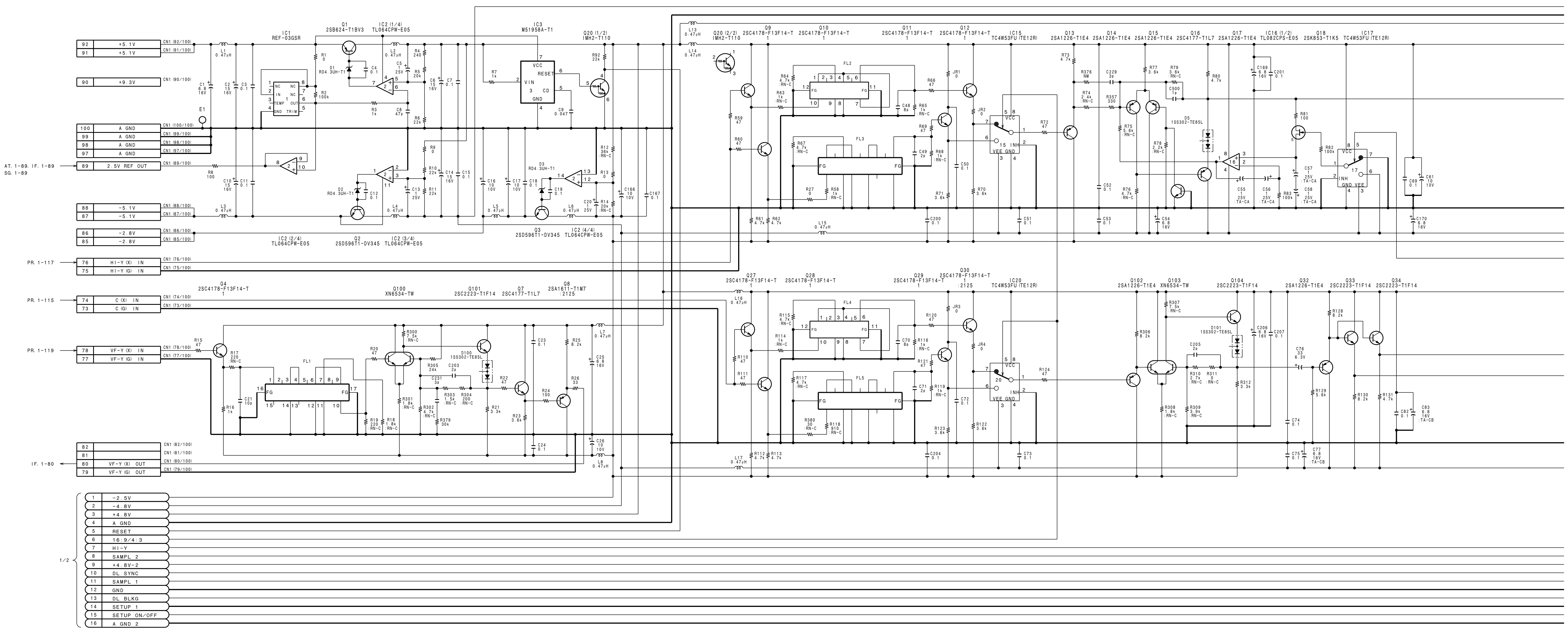
NOTE:
NM: NO MOUNT

DA-88A (1/2)

BOARD NO. 1-657-450-21
LOT NO. 803-

DA-88A (2/2)

BVP-570 (SY)


92 +5.1V
91 +5.1V
90 +9.3V
100 A GND
99 A GND
98 A GND
97 A GND
AT. 1-89, IF. 1-89
SG. 1-89
89 2.5V REF OUT
88 -5.1V
87 -5.1V
86 -2.8V
85 -2.8V
PR. 1-117
76 HI-Y (X) IN
75 HI-Y (G) IN
PR. 1-115
74 C (X) IN
73 C (G) IN
PR. 1-119
78 VF-Y (X) IN
77 VF-Y (G) IN
82
81
IF. 1-80
80 VF-Y (X) OUT
79 VF-Y (G) OUT
1/2
1 -2.5V
2 -4.8V
3 +4.8V
4 A GND
5 RESET
6 16:9/4:3
7 HI-Y
8 SAMPL 2
9 +4.8V-2
10 DL SYNC
11 SAMPL 1
12 GND
13 DL BLKG
14 SETUP 1
15 SETUP ON/OFF
16 A GND 2
IC1 REF-03GSR
Q1 2SB624-T1BV3
IC2 (1/4) TL064CPW-E05
IC3 M51958A-T1
Q20 (1/2) IMH2-T110
IC2 (2/4) TL064CPW-E05
Q2 2SD596T1-DV345
IC2 (3/4) TL064CPW-E05
Q3 2SD596T1-DV345
IC2 (4/4) TL064CPW-E05
Q20 (2/2) IMH2-T110
Q9 2SC4178-F13F14-T
Q10 2SC4178-F13F14-T
Q11 2SC4178-F13F14-T
Q12 2SC4178-F13F14-T
IC15 TC4W53FU (TE12R)
Q13 2SA1226-T1E4
Q14 2SA1226-T1E4
Q15 2SA1226-T1E4
Q16 2SC4177-T1L7
Q17 2SA1226-T1E4
IC16 (1/2) TL082CPS-E05
Q18 2SK853-T1K5
IC17 TC4W53FU (TE12R)
FL1
FL2
FL3
FL4
FL5
Q4 2SC4178-F13F14-T
Q100 XN6534-TW
Q101 2SC2223-T1F14
Q7 2SC4177-T1L7
Q8 2SA1611-T1M7
Q27 2SC4178-F13F14-T
Q28 2SC4178-F13F14-T
Q29 2SC4178-F13F14-T
Q30 2SC4178-F13F14-T
IC20 TC4W53FU (TE12R)
Q102 2SA1226-T1E4
Q103 XN6534-TW
Q104 2SC2223-T1F14
Q32 2SA1226-T1E4
Q33 2SC2223-T1F14
Q34 2SC2223-T1F14
D1 RD4.3UH-T1
D2 RD4.3UH-T1
D3 RD4.3UH-T1
D5 1SS302-TE85L
D100 1SS302-TE85L
D101 1SS302-TE85L
E1
1
2
3
4
5
A
B
C
D
E
F
G
H

9-16

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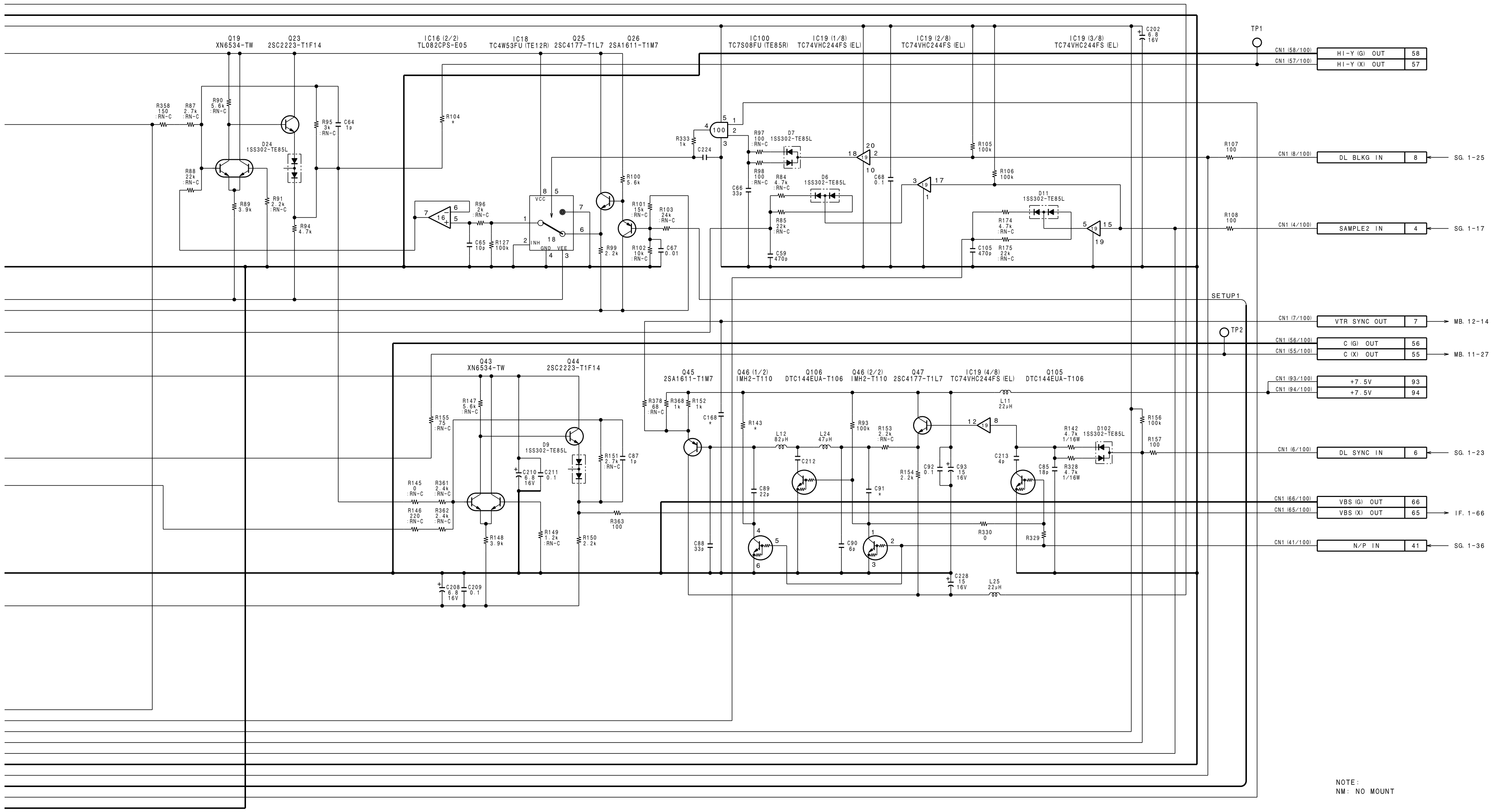
1
2
3
4
5
Q19
XN6534-TW
Q23
2SC2223-T1F14
IC16 (2/2)
TL082CPS-E05
IC18
TC4W53FU (TE12R)
Q25
2SC4177-T1L7
Q26
2SA1611-T1M7
IC100
TC7S08FU (TE85R)
IC19 (1/8)
TC74VHC244FS (EL)
IC19 (2/8)
TC74VHC244FS (EL)
IC19 (3/8)
TC74VHC244FS (EL)
C202
6.8
16V
TP1
CN1 (58/100)
CN1 (57/100)
HI-Y (G) OUT
58
HI-Y (X) OUT
57
R107
100
CN1 (8/100)
DL BLKG IN
8
SG, 1-25
R108
100
CN1 (4/100)
SAMPLE2 IN
4
SG, 1-17
SETUP1
CN1 (7/100)
VTR SYNC OUT
7
MB, 12-14
TP2
CN1 (56/100)
CN1 (55/100)
C (G) OUT
56
C (X) OUT
55
MB, 11-27
CN1 (93/100)
CN1 (94/100)
+7.5V
93
+7.5V
94
CN1 (6/100)
DL SYNC IN
6
SG, 1-23
CN1 (66/100)
CN1 (65/100)
VBS (G) OUT
66
VBS (X) OUT
65
IF, 1-66
CN1 (41/100)
N/P IN
41
SG, 1-36
Q43
XN6534-TW
Q44
2SC2223-T1F14
Q45
2SA1611-T1M7
Q46 (1/2)
IMH2-T110
Q106
DTC144EUA-T106
Q46 (2/2)
IMH2-T110
Q47
2SC4177-T1L7
IC19 (4/8)
TC74VHC244FS (EL)
Q105
DTC144EUA-T106
D9
1SS302-TE85L
D102
1SS302-TE85L
L11
22μH
L12
82μH
L24
47μH
L25
22μH

NOTE:
NM: NO MOUNT

DA-88A (2/2)

BOARD NO. 1-657-450-21
LOT NO. 803-

BVP-570 (SY)

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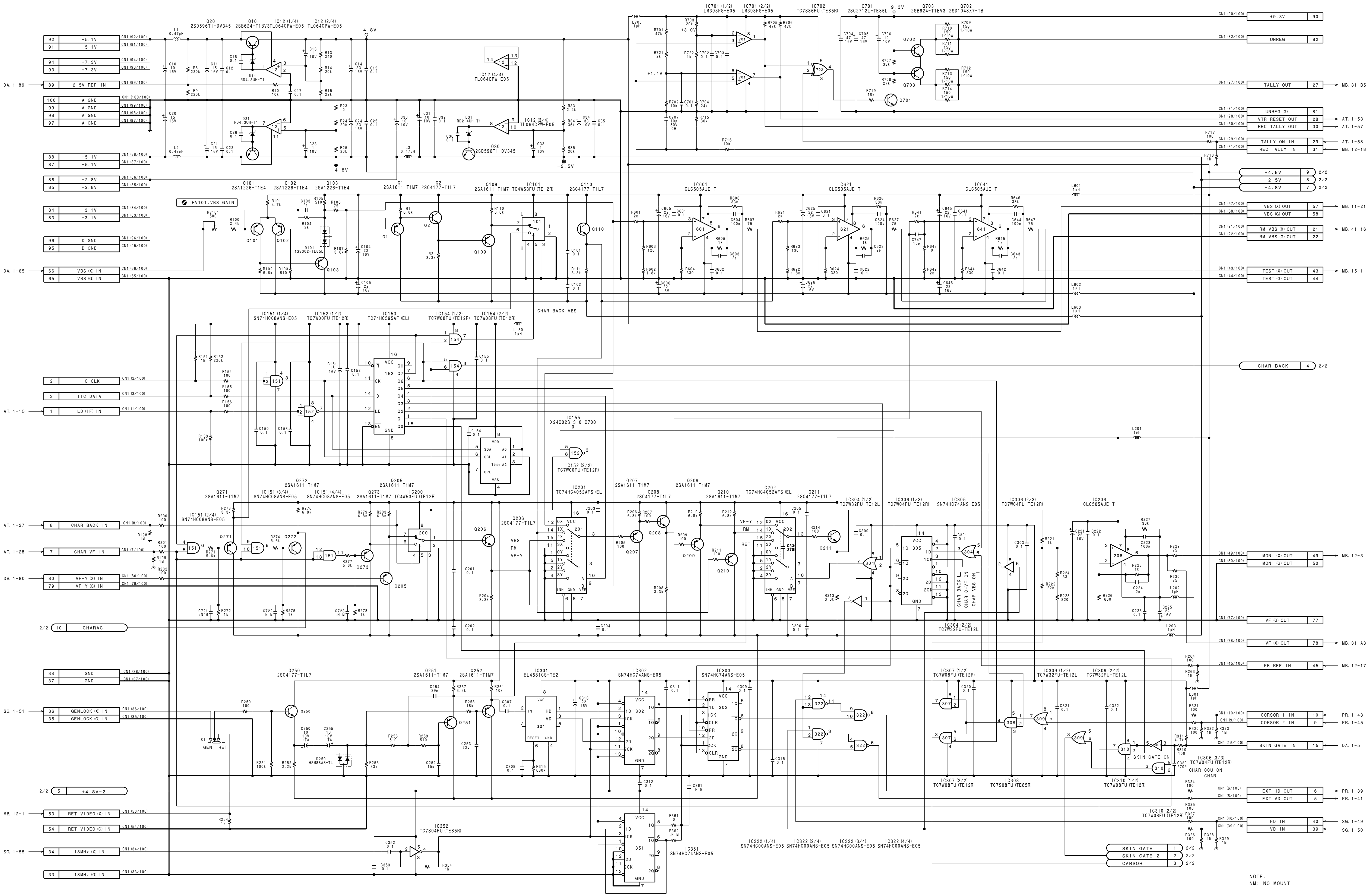

+5.1V
+7.3V
2.5V REF IN
A GND
-5.1V
-2.8V
+3.1V
D GND
VBS (X) IN
VBS (G) IN
IIC CLK
IIC DATA
LD (IF) IN
CHAR BACK IN
CHAR VF IN
VF-Y (X) IN
VF-Y (G) IN
CHARAC
GND
GENLOCK (X) IN
GENLOCK (G) IN
+4.8V-2
RET VIDEO (X) IN
RET VIDEO (G) IN
18MHz (X) IN
18MHz (G) IN
+9.3V
UNREG
TALLY OUT
UNREG (G)
VTR RESET OUT
REC TALLY OUT
TALLY ON IN
REC TALLY IN
+4.8V
-2.5V
-4.8V
VBS (X) OUT
VBS (G) OUT
RM VBS (X) OUT
RM VBS (G) OUT
TEST (X) OUT
TEST (G) OUT
CHAR BACK
MONI (X) OUT
MONI (G) OUT
VF (G) OUT
VF (X) OUT
PB REF IN
CURSOR 1 IN
CURSOR 2 IN
SKIN GATE IN
EXT HD OUT
EXT VD OUT
HD IN
VD IN
SKIN GATE
SKIN GATE 2
CARSOR
RV101 VBS GAIN
CHAR BACK VBS
IC12 TL064CPW-E05
IC101 TC4W53FU (TE12R)
IC153 TC74HC595AF (EL)
IC155 X24C02S-3.0-C700
IC200 TC4W53FU (TE12R)
IC201 TC74HC4052AFS (EL)
IC202 TC74HC4052AFS (EL)
IC206 CLC505AJE-T
IC301 EL4581CS-TE2
IC302 SN74HC74ANS-E05
IC303 SN74HC74ANS-E05
IC351 SN74HC74ANS-E05
IC352 TC7S04FU (TE85R)
IC601 CLC505AJE-T
IC621 CLC505AJE-T
IC641 CLC505AJE-T
IC701 LM393PS-E05
IC702 TC7S86FU (TE85R)
IC322 SN74HC00ANS-E05
NOTE:
NM: NO MOUNT

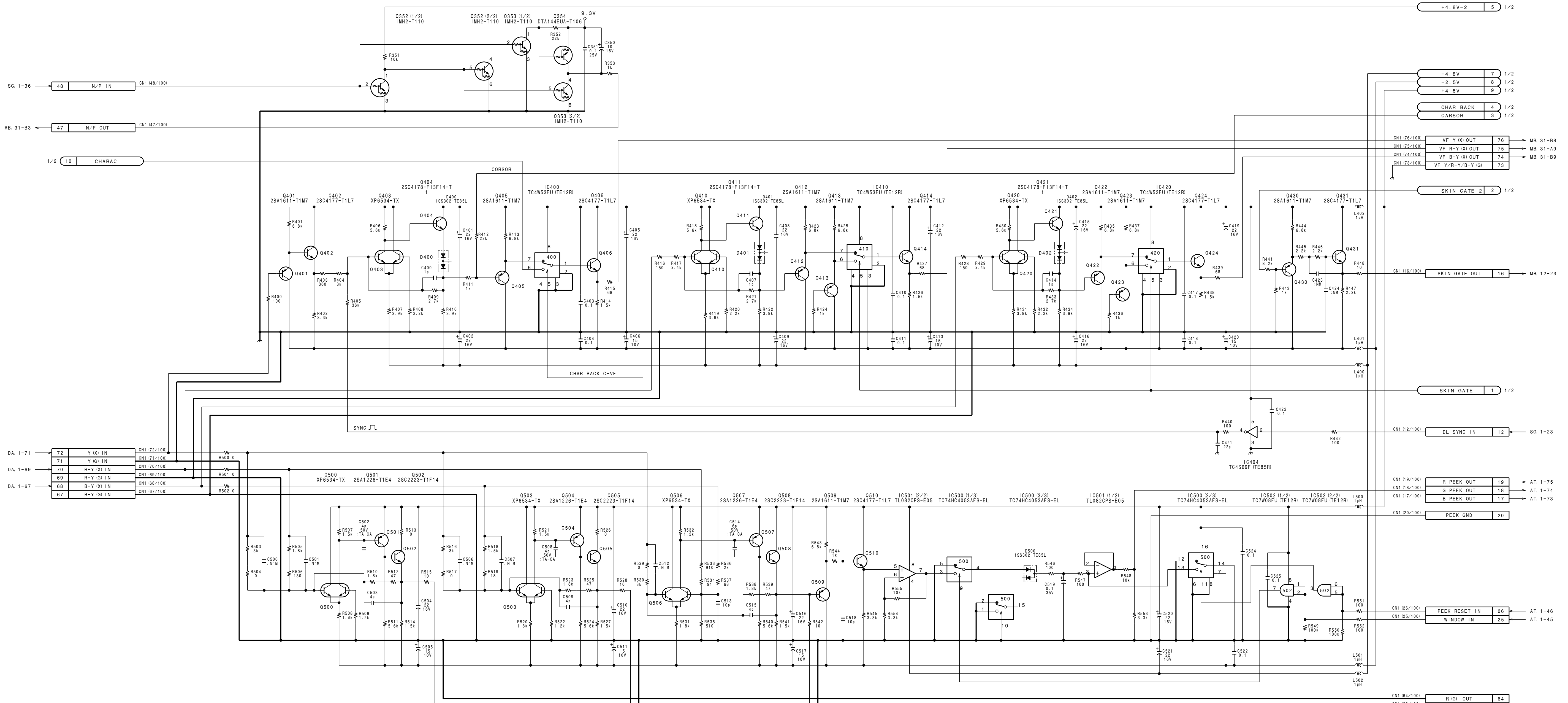
IF-510 (1/2)

BOARD NO. 1-657-453-21
LOT NO. 803-

A B C D E F G H

IF-510 (2/2)

BVP-570 (SY)



SG. 1-36
48 N/P IN
MB. 31-B3
47 N/P OUT
1/2 10 CHARAC
DA. 1-71
72 Y (X) IN
71 Y (G) IN
DA. 1-69
70 R-Y (X) IN
69 R-Y (G) IN
DA. 1-67
68 B-Y (X) IN
67 B-Y (G) IN
Q352 (1/2) IMH2-T110
Q352 (2/2) IMH2-T110
Q353 (1/2) IMH2-T110
Q354 DTA144EUA-T106
Q353 (2/2) IMH2-T110
9.3V
CORSOR
SYNC
CHAR BACK C-VF
Q401 2SA1611-T1M7
Q402 2SC4177-T1L7
Q403 XP6534-TX
Q404 2SC4178-F13F14-T
D400 1SS302-TE85L
Q405 2SA1611-T1M7
IC400 TC4W53FU (TE12R)
Q406 2SC4177-T1L7
Q410 XP6534-TX
Q411 2SC4178-F13F14-T
D401 1SS302-TE85L
Q412 2SA1611-T1M7
Q413 2SA1611-T1M7
IC410 TC4W53FU (TE12R)
Q414 2SC4177-T1L7
Q420 XP6534-TX
Q421 2SC4178-F13F14-T
D402 1SS302-TE85L
Q422 2SA1611-T1M7
Q423 2SA1611-T1M7
IC420 TC4W53FU (TE12R)
Q424 2SC4177-T1L7
Q430 2SA1611-T1M7
Q431 2SC4177-T1L7
IC404 TC4S69F (TE85R)
Q500 XP6534-TX
Q501 2SA1226-T1E4
Q502 2SC2223-T1F14
Q503 XP6534-TX
Q504 2SA1226-T1E4
Q505 2SC2223-T1F14
Q506 XP6534-TX
Q507 2SA1226-T1E4
Q508 2SC2223-T1F14
Q509 2SA1611-T1M7
Q510 2SC4177-T1L7
IC501 (2/2) TL082CPS-E05
IC500 (1/3) TC74HC4053AFS-EL
IC500 (3/3) TC74HC4053AFS-EL
IC501 (1/2) TL082CPS-E05
IC500 (2/3) TC74HC4053AFS-EL
IC502 (1/2) TC7W08FU (TE12R)
IC502 (2/2) TC7W08FU (TE12R)
D500 1SS302-TE85L
+4.8V-2 5 1/2
-4.8V 7 1/2
-2.5V 8 1/2
+4.8V 9 1/2
CHAR BACK 4 1/2
CARSOR 3 1/2
VF Y (X) OUT 76 MB. 31-B8
VF R-Y (X) OUT 75 MB. 31-A9
VF B-Y (X) OUT 74 MB. 31-B9
VF Y/R-Y/B-Y (G) 73
SKIN GATE 2 2 1/2
SKIN GATE OUT 16 MB. 12-23
SKIN GATE 1 1/2
DL SYNC IN 12 SG. 1-23
R PEEK OUT 19 AT. 1-75
G PEEK OUT 18 AT. 1-74
B PEEK OUT 17 AT. 1-73
PEEK GND 20
PEEK RESET IN 26 AT. 1-46
WINDOW IN 25 AT. 1-45
R (G) OUT 64
R (X) OUT 63 MB. 11-17
B (G) OUT 60
B (X) OUT 59 MB. 11-19
G (G) OUT 62
G (X) OUT 61 MB. 11-18
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTE:
NM: NO MOUNT

IF-510 (2/2)

BOARD NO. 1-657-453-21
LOT NO. 803-

9-19

BVP-570 (SY)

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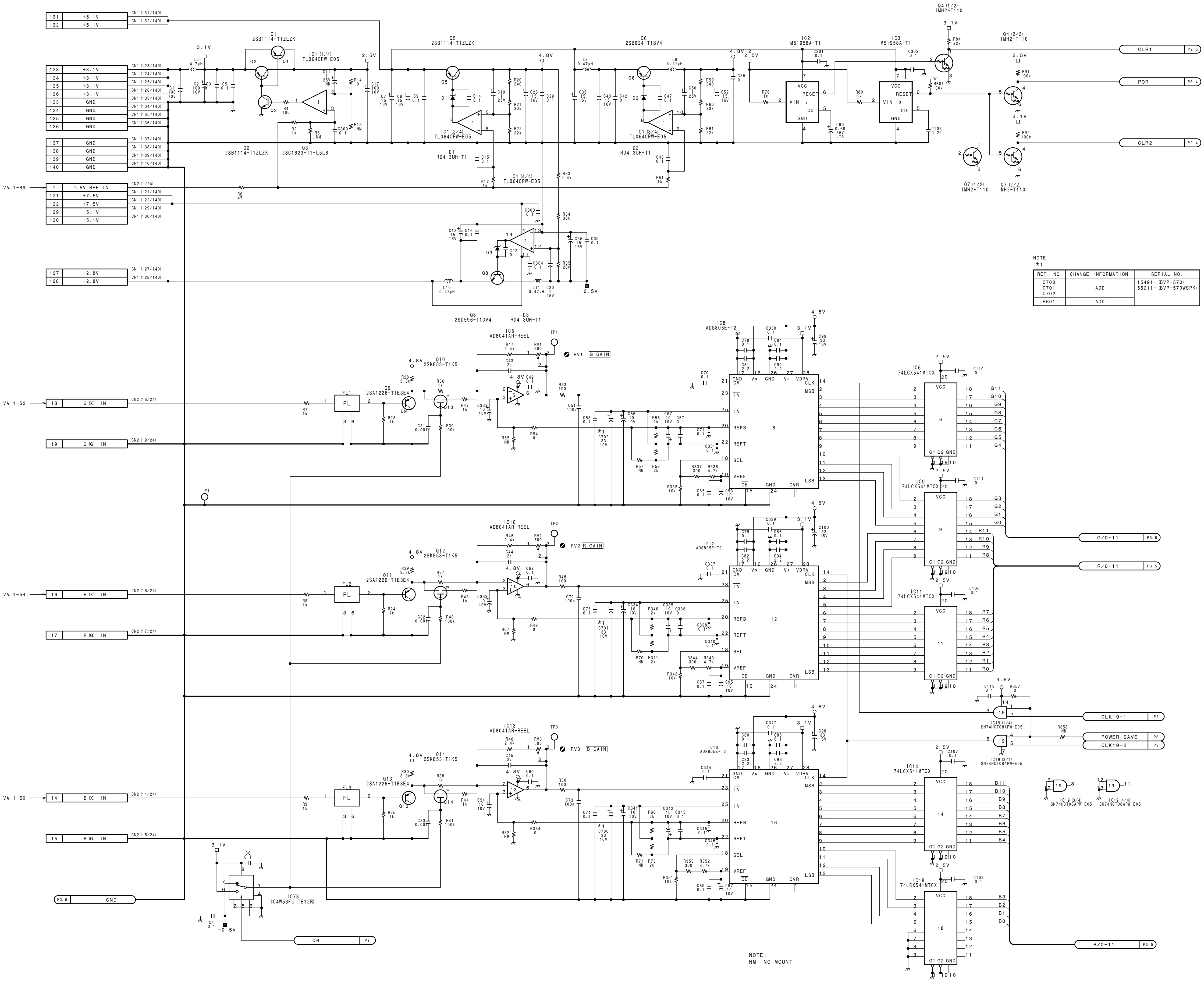

CN1 (131/140) 131 +5.1V
132 +5.1V
123 +3.1V
124 +3.1V
125 +3.1V
126 +3.1V
133 GND
134 GND
135 GND
136 GND
137 GND
138 GND
139 GND
140 GND
VA.1-89 1 2.5V REF IN
121 +7.5V
122 +7.5V
129 -5.1V
130 -5.1V
127 -2.8V
128 -2.8V
Q1 2SB1114-T1ZLZK
IC1 (1/4) TL064CPW-E05
Q2 2SB1114-T1ZLZK
Q3 2SC1623-T1-L5L6
Q5 2SB1114-T1ZLZK
IC1 (2/4) TL064CPW-E05
D1 RD4.3UH-T1
Q6 2SB624-T1BV4
IC1 (3/4) TL064CPW-E05
D2 RD4.3UH-T1
IC1 (4/4) TL064CPW-E05
IC2 M51958A-T1
IC3 M51958A-T1
Q4 (1/2) IMH2-T110
Q4 (2/2) IMH2-T110
Q7 (1/2) IMH2-T110
Q7 (2/2) IMH2-T110
CLR1 P2.5
POR P3.4
CLR2 P2.4
Q8 2SD596-T1DV4
D3 RD4.3UH-T1
-2.5V
IC5 AD8041AR-REEL
TP1
RV1 G GAIN
Q10 2SK853-T1K5
Q9 2SA1226-T1E3E4
VA.1-52 18 G(X) IN
19 G(G) IN
FL1 FL
IC8 AD5805E-T2
IC6 74LCX541MTCX
IC9 74LCX541MTCX
G11 G10 G9 G8 G7 G6 G5 G4
G3 G2 G1 G0 R11 R10 R9 R8
G/0-11 P3.5
R/0-11 P3.5
E1
IC10 AD8041AR-REEL
TP2
RV2 R GAIN
Q12 2SK853-T1K5
Q11 2SA1226-T1E3E4
VA.1-54 16 R(X) IN
17 R(G) IN
FL2 FL
IC12 AD5805E-T2
IC11 74LCX541MTCX
R7 R6 R5 R4 R3 R2 R1 R0
IC19 (1/4) SN74HCT08APW-E05
CLK19-1 P2
POWER SAVE P3
CLK19-2 P2
IC19 (2/4) SN74HCT08APW-E05
IC19 (3/4) SN74HCT08APW-E05
IC19 (4/4) SN74HCT08APW-E05
IC13 AD8041AR-REEL
TP3
RV3 B GAIN
Q14 2SK853-T1K5
Q13 2SA1226-T1E3E4
VA.1-50 14 B(X) IN
15 B(G) IN
FL3 FL
IC16 AD5805E-T2
IC14 74LCX541MTCX
B11 B10 B9 B8 B7 B6 B5 B4
IC18 74LCX541MTCX
B3 B2 B1 B0
B/0-11 P3.5
IC73 TC4W53FU(TE12R)
P2.5 GND
Q6 P2
NOTE: NM: NO MOUNT

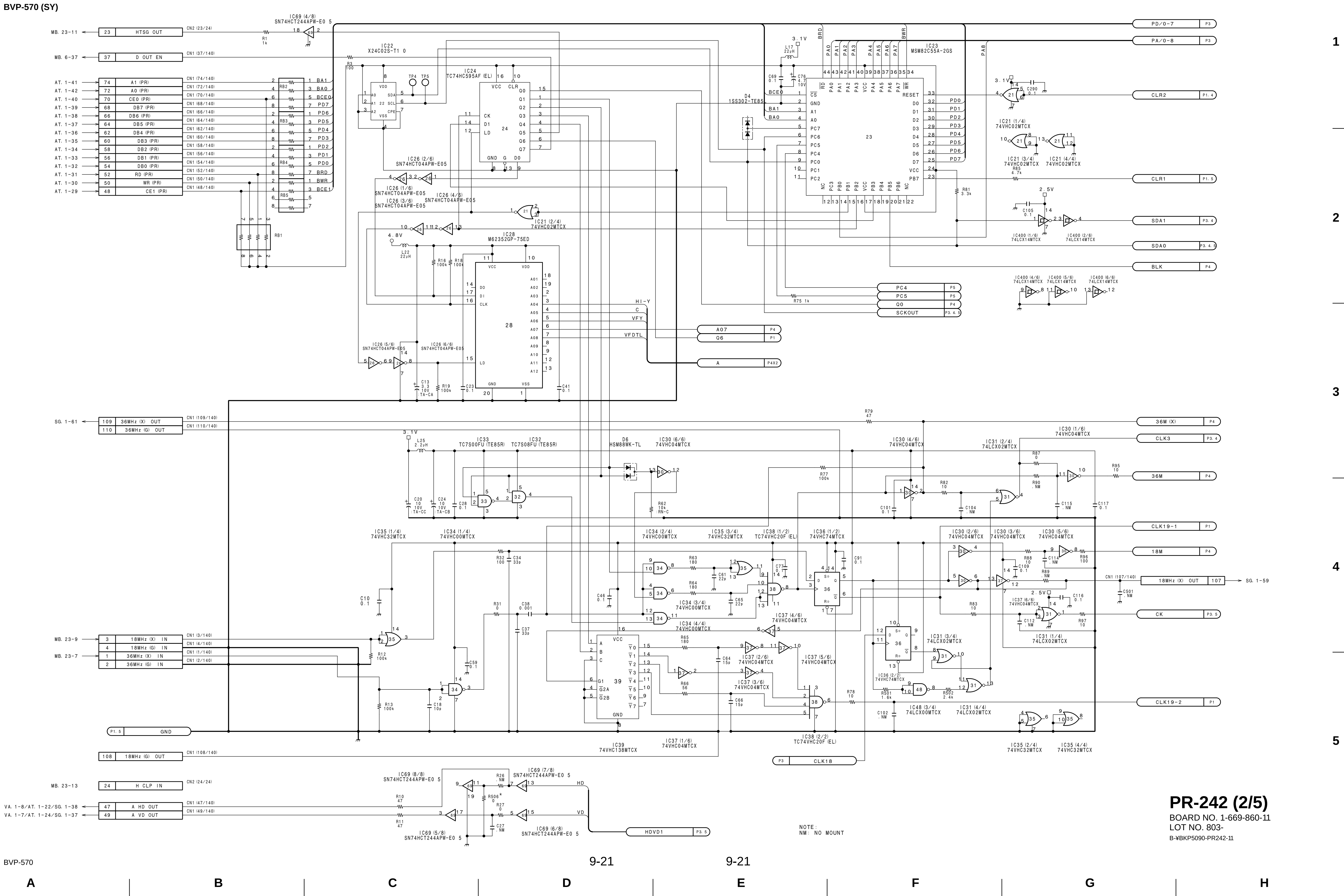
NOTE
*1

REF. NO.	CHANGE INFORMATION	SERIAL NO.
C700 C701 C702	ADD	15491- (BVP-570) 55211- (BVP-570WSPK)
R601	ADD	

PR-242 (1/5)

BOARD NO. 1-669-860-11
LOT NO. 803-
B-¥BKP5090-PR242-11

A B C D E F G H

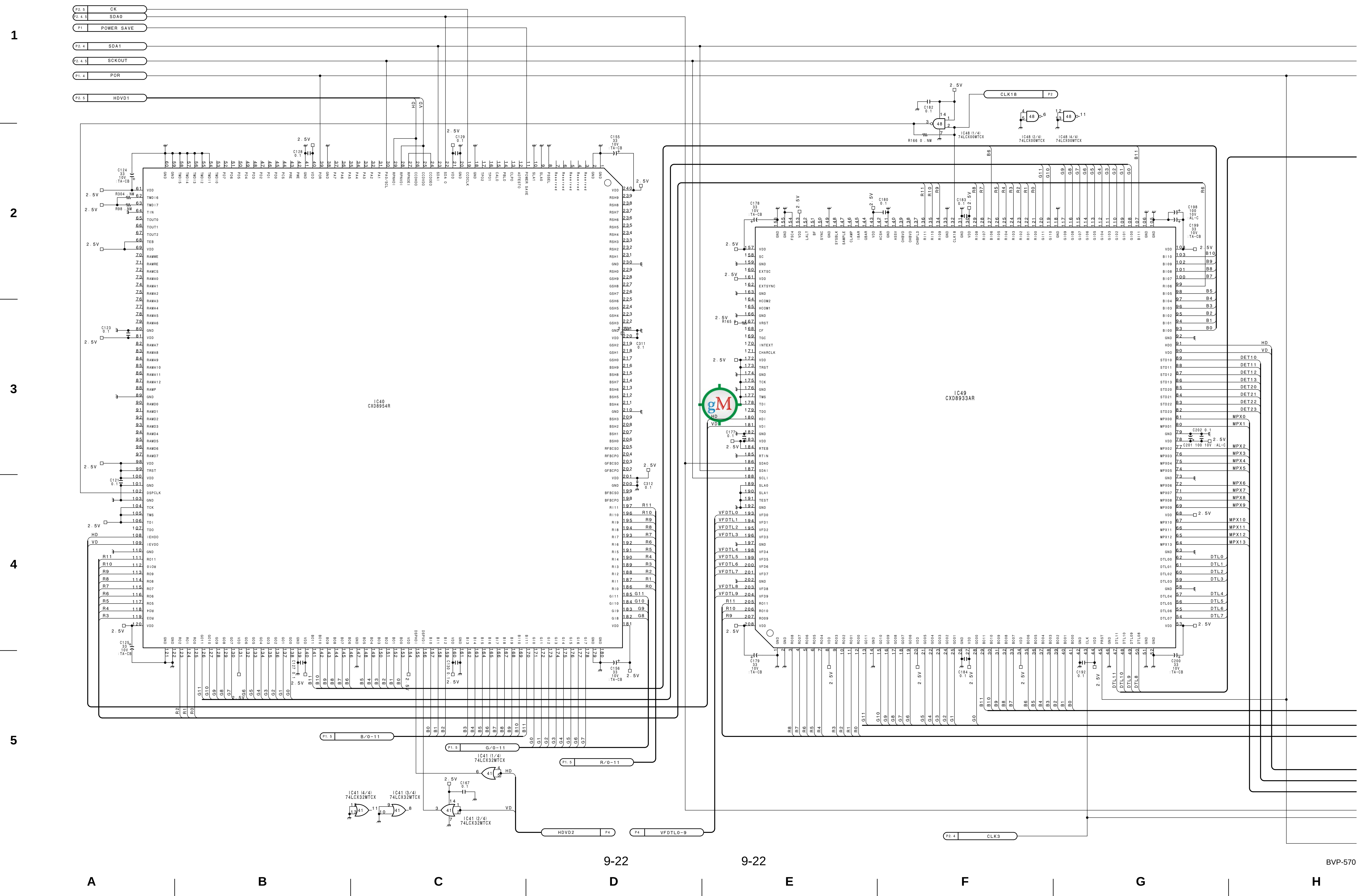

BVP-570 (SY)
MB. 23-11 23 HTSG OUT CN2 (23/24)
MB. 6-37 37 D OUT EN CN1 (37/140)
AT. 1-41 74 A1 (PR)
AT. 1-42 72 A0 (PR)
AT. 1-40 70 CE0 (PR)
AT. 1-39 68 DB7 (PR)
AT. 1-38 66 DB6 (PR)
AT. 1-37 64 DB5 (PR)
AT. 1-36 62 DB4 (PR)
AT. 1-35 60 DB3 (PR)
AT. 1-34 58 DB2 (PR)
AT. 1-33 56 DB1 (PR)
AT. 1-32 54 DB0 (PR)
AT. 1-31 52 RD (PR)
AT. 1-30 50 WR (PR)
AT. 1-29 48 CE1 (PR)
RB1 RB2 RB3 RB4 RB5
BA1 BA0 BCE0 PD7 PD6 PD5 PD4 PD3 PD2 PD1 PD0 BRD BWR BCE1
IC69 (4/8) SN74HCT244APW-E0 5
IC22 X24C02S-T1 0
TP4 TP5
IC24 TC74HC595AF (EL)
IC23 MSM82C55A-2GS
D4 1SS302-TE85
L17 22μH
3.1V
IC26 (2/6) SN74HCT04APW-E05
IC26 (1/6) SN74HCT04APW-E05
IC26 (4/6) SN74HCT04APW-E05
IC26 (3/6) SN74HCT04APW-E05
IC21 (2/4) 74VHC02MTCX
IC28 M62352GP-75ED
4.8V
L22 22μH
R16 100k
R18 100k
HI-Y C VFY VFDTL
A07 P4
Q6 P1
A P4X2
IC26 (5/6) SN74HCT04APW-E05
IC26 (6/6) SN74HCT04APW-E05
C13 3.3 10V TA-CA
R19 100k
PD/0-7 P3
PA/0-8 P3
CLR2 P1, 4
CLR1 P1, 5
SDA1 P3, 4
SDA0 P3, 4, 5
BLK P4
PC4 P5
PC5 P5
Q0 P4
SCKOUT P3, 4, 5
R75 1k
R81 3.3k
R85 4.7k
IC21 (1/4) 74VHC02MTCX
IC21 (3/4) 74VHC02MTCX
IC21 (4/4) 74VHC02MTCX
2.5V
C105 0.1
IC400 (1/6) 74LCX14MTCX
IC400 (2/6) 74LCX14MTCX
IC400 (4/6) 74LCX14MTCX
IC400 (5/6) 74LCX14MTCX
IC400 (6/6) 74LCX14MTCX
SG. 1-61 109 36MHz (X) OUT CN1 (109/140)
110 36MHz (G) OUT CN1 (110/140)
R79 47
36M (X) P4
CLK3 P3, 4
36M P4
CLK19-1 P1
18M P4
SG. 1-59 107 18MHz (X) OUT CN1 (107/140)
CK P3, 5
CLK19-2 P1
IC33 TC7S00FU (TE85R)
IC32 TC7S08FU (TE85R)
D6 HSM88WK-TL
IC30 (6/6) 74VHC04MTCX
IC30 (4/6) 74VHC04MTCX
IC30 (1/6) 74VHC04MTCX
IC31 (2/4) 74LCX02MTCX
L25 2.2μH
R62 10k RN-C
R77 100k
IC35 (1/4) 74VHC32MTCX
IC34 (1/4) 74VHC00MTCX
IC34 (2/4) 74VHC00MTCX
IC35 (3/4) 74VHC32MTCX
IC38 (1/2) TC74VHC20F (EL)
IC36 (1/2) 74VHC74MTCX
IC30 (2/6) 74VHC04MTCX
IC30 (3/6) 74VHC04MTCX
IC30 (5/6) 74VHC04MTCX
IC34 (3/4) 74VHC00MTCX
IC34 (4/4) 74VHC00MTCX
IC37 (4/6) 74VHC04MTCX
IC37 (6/6) 74VHC04MTCX
IC37 (2/6) 74VHC04MTCX
IC37 (5/6) 74VHC04MTCX
IC37 (3/6) 74VHC04MTCX
IC37 (1/6) 74VHC04MTCX
IC36 (2/2) 74VHC74MTCX
IC31 (3/4) 74LCX02MTCX
IC31 (1/4) 74LCX02MTCX
IC31 (4/4) 74LCX02MTCX
IC48 (3/4) 74LCX00MTCX
IC38 (2/2) TC74VHC20F (EL)
IC39 74VHC138MTCX
IC35 (2/4) 74VHC32MTCX
IC35 (4/4) 74VHC32MTCX
MB. 23-9 3 18MHz (X) IN CN1 (3/140)
4 18MHz (G) IN CN1 (4/140)
MB. 23-7 1 36MHz (X) IN CN1 (1/140)
2 36MHz (G) IN CN1 (2/140)
P1, 5 GND
108 18MHz (G) OUT CN1 (108/140)
CLK18 P3
MB. 23-13 24 H CLP IN CN2 (24/24)
VA. 1-8/AT. 1-22/SG. 1-38 47 A HD OUT CN1 (47/140)
VA. 1-7/AT. 1-24/SG. 1-37 49 A VD OUT CN1 (49/140)
IC69 (8/8) SN74HCT244APW-E0 5
IC69 (7/8) SN74HCT244APW-E0 5
IC69 (5/8) SN74HCT244APW-E0 5
IC69 (6/8) SN74HCT244APW-E0 5
HD VD
HDVD1 P3, 5
NOTE:
NM: NO MOUNT
1 2 3 4 5
A B C D E F G H

PR-242 (2/5)

BOARD NO. 1-669-860-11
LOT NO. 803-
B-¥BKP5090-PR242-11

PR-242 (3/5)

BVP-570 (SY)


CK
SDA0
POWER SAVE
SDA1
SCKOUT
POR
HDVD1
IC40
CXD8954R
IC49
CXD8933AR
CLK18
IC48 (1/4)
74LCX00MTCX
IC48 (2/4)
74LCX00MTCX
IC48 (4/4)
74LCX00MTCX
R166 0 . NM
C182 0.1
B/O-11
G/O-11
R/O-11
IC41 (1/4)
74LCX32MTCX
IC41 (2/4)
74LCX32MTCX
IC41 (3/4)
74LCX32MTCX
IC41 (4/4)
74LCX32MTCX
C167
HD
VD
HDVD2
VFDTL0-9
CLK3
2.5V
C124 33 10V TA-CB
C155 33 10V TA-CB
C156 33 10V TA-CB
C178 33 10V TA-CB
C179 33 10V TA-CB
C198 100 10V AL-C
C199 33 10V TA-CB
C200 33 10V TA-CB
DET10
DET11
DET12
DET13
DET20
DET21
DET22
DET23
MPX0
MPX1
MPX2
MPX3
MPX4
MPX5
MPX6
MPX7
MPX8
MPX9
MPX10
MPX11
MPX12
MPX13
DTL0
DTL1
DTL2
DTL3
DTL4
DTL5
DTL6
DTL7
VFDTL0
VFDTL1
VFDTL2
VFDTL3
VFDTL4
VFDTL5
VFDTL6
VFDTL7
VFDTL8
VFDTL9
1
2
3
4
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A
B
C
D
E
F
G
H

9-22

PR-242 (3/5)

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4
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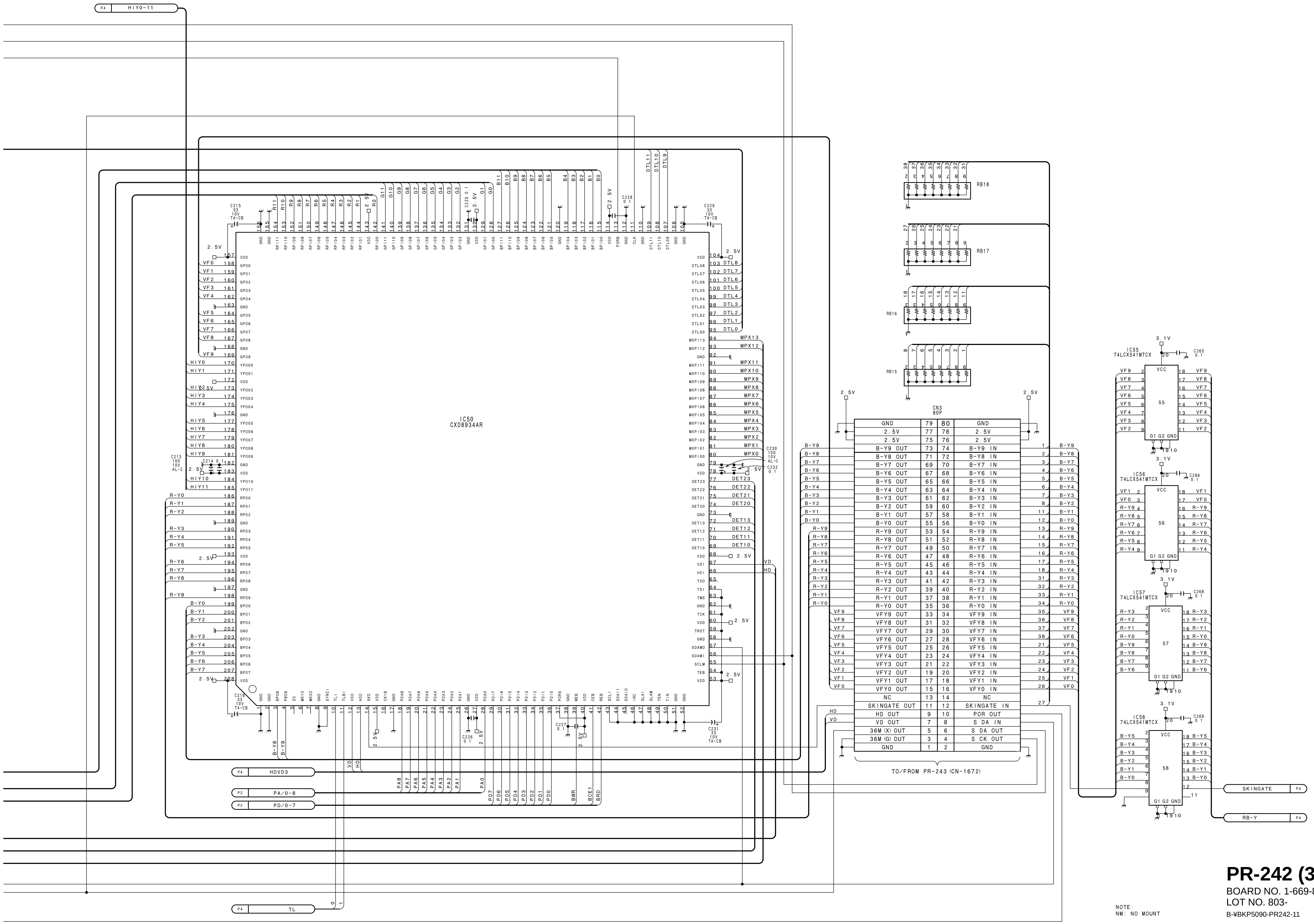

P4 HIY0-11
IC50
CXD8934AR
C215 33 10V :TA-CB
C228 0.1
C229 33 10V :TA-CB
C225 0.1
C213 100 10V :AL-C
C214 0.1
C230 100 10V :AL-C
C232 0.1
C218 33 10V :TA-CB
C226 0.1
C227 0.1
C231 33 10V :TA-CB
2.5V
DTL11 DTL10 DTL9
R11 R10 R9 R8 R7 R6 R5 R4 R3 R2 R1 R0
G11 G10 G9 G8 G7 G6 G5 G4 G3 G2 G1 G0
B11 B10 B9 B8 B7 B6 B5 B4 B3 B2 B1 B0
VF0 VF1 VF2 VF3 VF4 VF5 VF6 VF7 VF8 VF9
HIY0 HIY1 HIY2 HIY3 HIY4 HIY5 HIY6 HIY7 HIY8 HIY9 HIY10 HIY11
R-Y0 R-Y1 R-Y2 R-Y3 R-Y4 R-Y5 R-Y6 R-Y7 R-Y8 R-Y9
B-Y0 B-Y1 B-Y2 B-Y3 B-Y4 B-Y5 B-Y6 B-Y7 B-Y8 B-Y9
DTL8 DTL7 DTL6 DTL5 DTL4 DTL3 DTL2 DTL1 DTL0
MPX13 MPX12 MPX11 MPX10 MPX9 MPX8 MPX7 MPX6 MPX5 MPX4 MPX3 MPX2 MPX1 MPX0
DET23 DET22 DET21 DET20 DET13 DET12 DET11 DET10
VD HD
PA8 PA7 PA6 PA5 PA4 PA3 PA2 PA1 PA0
PD7 PD6 PD5 PD4 PD3 PD2 PD1 PD0
BWR BCE1 BRD
P4 HDVD3
P2 PA/0-8
P2 PD/0-7
P4 TL
RB18 RB17 RB16 RB15
CN3
80P
GND 79 80 GND
2.5V 77 78 2.5V
2.5V 75 76 2.5V
B-Y9 OUT 73 74 B-Y9 IN
B-Y8 OUT 71 72 B-Y8 IN
B-Y7 OUT 69 70 B-Y7 IN
B-Y6 OUT 67 68 B-Y6 IN
B-Y5 OUT 65 66 B-Y5 IN
B-Y4 OUT 63 64 B-Y4 IN
B-Y3 OUT 61 62 B-Y3 IN
B-Y2 OUT 59 60 B-Y2 IN
B-Y1 OUT 57 58 B-Y1 IN
B-Y0 OUT 55 56 B-Y0 IN
R-Y9 OUT 53 54 R-Y9 IN
R-Y8 OUT 51 52 R-Y8 IN
R-Y7 OUT 49 50 R-Y7 IN
R-Y6 OUT 47 48 R-Y6 IN
R-Y5 OUT 45 46 R-Y5 IN
R-Y4 OUT 43 44 R-Y4 IN
R-Y3 OUT 41 42 R-Y3 IN
R-Y2 OUT 39 40 R-Y2 IN
R-Y1 OUT 37 38 R-Y1 IN
R-Y0 OUT 35 36 R-Y0 IN
VFY9 OUT 33 34 VFY9 IN
VFY8 OUT 31 32 VFY8 IN
VFY7 OUT 29 30 VFY7 IN
VFY6 OUT 27 28 VFY6 IN
VFY5 OUT 25 26 VFY5 IN
VFY4 OUT 23 24 VFY4 IN
VFY3 OUT 21 22 VFY3 IN
VFY2 OUT 19 20 VFY2 IN
VFY1 OUT 17 18 VFY1 IN
VFY0 OUT 15 16 VFY0 IN
NC 13 14 NC
SKINGATE OUT 11 12 SKINGATE IN
HD OUT 9 10 POR OUT
VD OUT 7 8 S DA IN
36M (X) OUT 5 6 S DA OUT
36M (G) OUT 3 4 S CK OUT
GND 1 2 GND
TO/FROM PR-243 (CN-1672)
3.1V
IC55 74LCX541MTCX
C265 0.1
IC56 74LCX541MTCX
C266 0.1
IC57 74LCX541MTCX
C268 0.1
IC58 74LCX541MTCX
C269 0.1
VCC
55 56 57 58
G1 G2 GND
SKINGATE P4
RB-Y P4

NOTE:
NM: NO MOUNT

PR-242 (3/5)

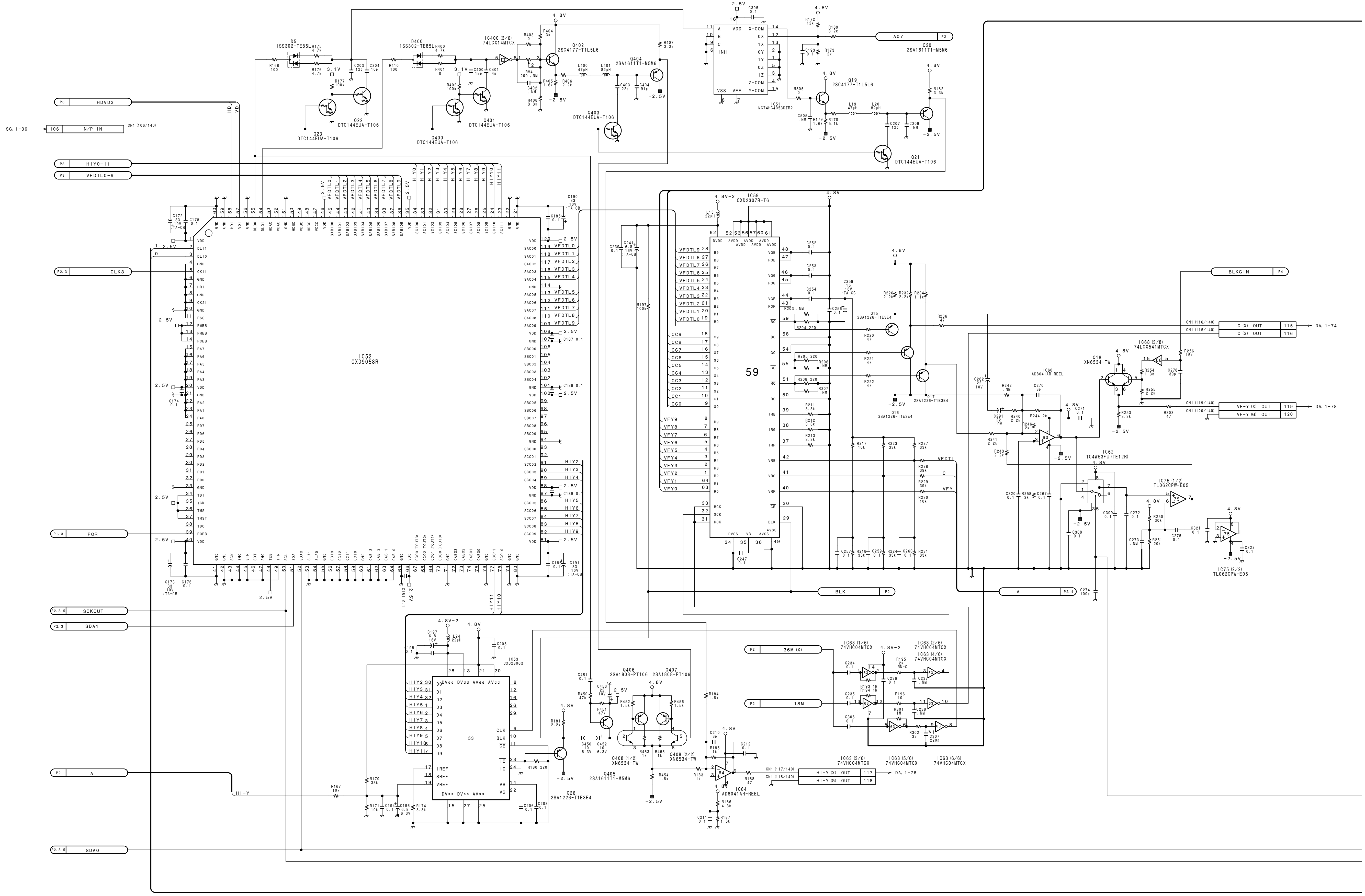
BOARD NO. 1-669-860-11
LOT NO. 803-
B-¥BKP5090-PR242-11

9-23

I J K L M N O P

PR-242 (4/5)

BVP-570 (SY)


1
2
3
4
5
IC52
CXD9058R
IC59
CXD2307R-T6
IC53
CXD2306Q
IC51
MC74HC4053DTR2
IC400 (3/6)
74LCX14MTCX
IC60
AD8041AR-REEL
IC62
TC4W53FU (TE12R)
IC64
AD8041AR-REEL
IC68 (3/8)
74LCX541MTCX
IC75 (1/2)
TL062CPW-E05
IC75 (2/2)
TL062CPW-E05
IC63 (1/6)
74VHC04MTCX
IC63 (2/6)
74VHC04MTCX
IC63 (3/6)
74VHC04MTCX
IC63 (4/6)
74VHC04MTCX
IC63 (5/6)
74VHC04MTCX
IC63 (6/6)
74VHC04MTCX
D5
1SS302-TE85L
D400
1SS302-TE85L
Q22
DTC144EUA-T106
Q23
DTC144EUA-T106
Q400
DTC144EUA-T106
Q401
DTC144EUA-T106
Q402
2SC4177-T1L5L6
Q403
DTC144EUA-T106
Q404
2SA1611T1-M5M6
Q19
2SC4177-T1L5L6
Q20
2SA1611T1-M5M6
Q21
DTC144EUA-T106
Q15
2SA1226-T1E3E4
Q16
2SA1226-T1E3E4
Q17
2SA1226-T1E3E4
Q18
XN6534-TW
Q26
2SA1226-T1E3E4
Q405
2SA1611T1-M5M6
Q406
2SA1808-PT106
Q407
2SA1808-PT106
Q408 (1/2)
XN6534-TW
Q408 (2/2)
XN6534-TW
HDVD3
SG. 1-36
106
N/P IN
CN1 (106/140)
HIY0-11
VFDTL0-9
CLK3
POR
SCKOUT
SDA1
A
HI-Y
SDA0
A07
BLKGIN
BLK
C (X) OUT
C (G) OUT
CN1 (116/140)
CN1 (115/140)
115
116
DA. 1-74
VF-Y (X) OUT
VF-Y (G) OUT
CN1 (119/140)
CN1 (120/140)
119
120
DA. 1-78
36M (X)
18M
HI-Y (X) OUT
HI-Y (G) OUT
CN1 (117/140)
CN1 (118/140)
117
118
DA. 1-76
4.8V
2.5V
-2.5V
4.8V-2
VFDTL
C
VFY
P2
P3
P4

9-24

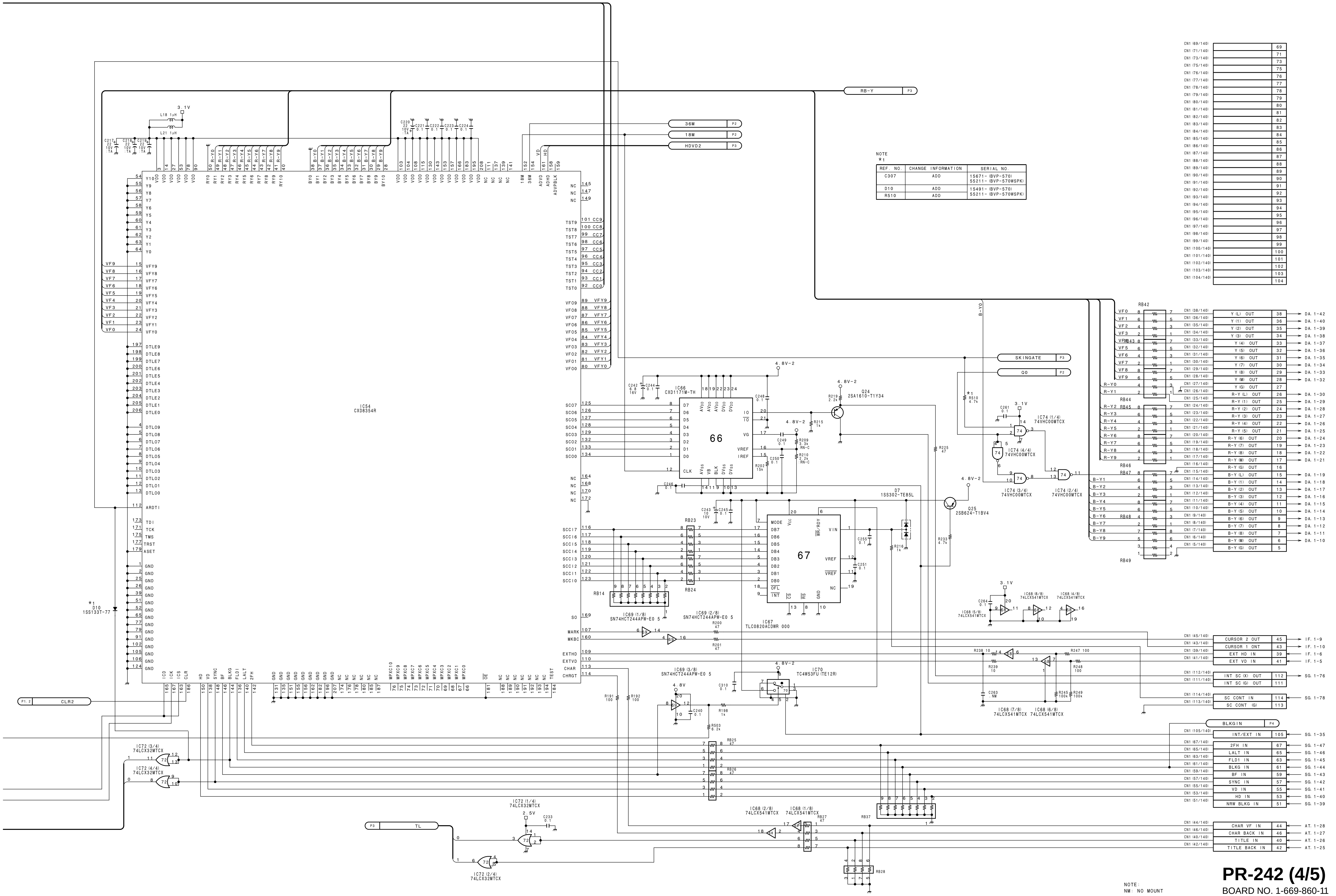
1

2

3

4

5


IC54
CXD8354R
IC66
CXD1171M-TH
Q24
2SA1610-T1Y34
IC67
TLC0820ACDWR 000
D7
1SS302-TE85L
Q25
2SB624-T1BV4
IC70
TC4W53FU(TE12R)
IC69 (1/8)
SN74HCT244APW-E0 5
IC69 (2/8)
SN74HCT244APW-E0 5
IC69 (3/8)
SN74HCT244APW-E0 5
IC72 (1/4)
74LCX32MTCX
IC72 (2/4)
74LCX32MTCX
IC72 (3/4)
74LCX32MTCX
IC72 (4/4)
74LCX32MTCX
IC74 (1/4)
74VHC00MTCX
IC74 (2/4)
74VHC00MTCX
IC74 (3/4)
74VHC00MTCX
IC74 (4/4)
74VHC00MTCX
IC68 (1/8)
74LCX541MTCX
IC68 (2/8)
74LCX541MTCX
IC68 (4/8)
74LCX541MTCX
IC68 (5/8)
74LCX541MTCX
IC68 (6/8)
74LCX541MTCX
IC68 (7/8)
74LCX541MTCX
IC68 (8/8)
74LCX541MTCX
*1
D10
1SS133T-77
*1
R510
4.7k
RB-Y
36M
18M
HDVD2
SKINGATE
Q0
BLKGIN
CLR2
TL
B-Y0
3.1V
4.8V-2
4.8V
2.5V
CN1 (69/140) 69
CN1 (71/140) 71
CN1 (73/140) 73
CN1 (75/140) 75
CN1 (76/140) 76
CN1 (77/140) 77
CN1 (78/140) 78
CN1 (79/140) 79
CN1 (80/140) 80
CN1 (81/140) 81
CN1 (82/140) 82
CN1 (83/140) 83
CN1 (84/140) 84
CN1 (85/140) 85
CN1 (86/140) 86
CN1 (87/140) 87
CN1 (88/140) 88
CN1 (89/140) 89
CN1 (90/140) 90
CN1 (91/140) 91
CN1 (92/140) 92
CN1 (93/140) 93
CN1 (94/140) 94
CN1 (95/140) 95
CN1 (96/140) 96
CN1 (97/140) 97
CN1 (98/140) 98
CN1 (99/140) 99
CN1 (100/140) 100
CN1 (101/140) 101
CN1 (102/140) 102
CN1 (103/140) 103
CN1 (104/140) 104
CN1 (38/140) Y (L) OUT 38 DA, 1-42
CN1 (36/140) Y (1) OUT 36 DA, 1-40
CN1 (35/140) Y (2) OUT 35 DA, 1-39
CN1 (34/140) Y (3) OUT 34 DA, 1-38
CN1 (33/140) Y (4) OUT 33 DA, 1-37
CN1 (32/140) Y (5) OUT 32 DA, 1-36
CN1 (31/140) Y (6) OUT 31 DA, 1-35
CN1 (30/140) Y (7) OUT 30 DA, 1-34
CN1 (29/140) Y (8) OUT 29 DA, 1-33
CN1 (28/140) Y (M) OUT 28 DA, 1-32
CN1 (27/140) Y (G) OUT 27
CN1 (26/140) R-Y (L) OUT 26 DA, 1-30
CN1 (25/140) R-Y (1) OUT 25 DA, 1-29
CN1 (24/140) R-Y (2) OUT 24 DA, 1-28
CN1 (23/140) R-Y (3) OUT 23 DA, 1-27
CN1 (22/140) R-Y (4) OUT 22 DA, 1-26
CN1 (21/140) R-Y (5) OUT 21 DA, 1-25
CN1 (20/140) R-Y (6) OUT 20 DA, 1-24
CN1 (19/140) R-Y (7) OUT 19 DA, 1-23
CN1 (18/140) R-Y (8) OUT 18 DA, 1-22
CN1 (17/140) R-Y (M) OUT 17 DA, 1-21
CN1 (16/140) R-Y (G) OUT 16
CN1 (15/140) B-Y (L) OUT 15 DA, 1-19
CN1 (14/140) B-Y (1) OUT 14 DA, 1-18
CN1 (13/140) B-Y (2) OUT 13 DA, 1-17
CN1 (12/140) B-Y (3) OUT 12 DA, 1-16
CN1 (11/140) B-Y (4) OUT 11 DA, 1-15
CN1 (10/140) B-Y (5) OUT 10 DA, 1-14
CN1 (9/140) B-Y (6) OUT 9 DA, 1-13
CN1 (8/140) B-Y (7) OUT 8 DA, 1-12
CN1 (7/140) B-Y (8) OUT 7 DA, 1-11
CN1 (6/140) B-Y (M) OUT 6 DA, 1-10
CN1 (5/140) B-Y (G) OUT 5
CN1 (45/140) CURSOR 2 OUT 45 IF, 1-9
CN1 (43/140) CURSOR 1 ONT 43 IF, 1-10
CN1 (39/140) EXT HD IN 39 IF, 1-6
CN1 (41/140) EXT VD IN 41 IF, 1-5
CN1 (112/140) INT SC (X) OUT 112 SG, 1-76
CN1 (111/140) INT SC (G) OUT 111
CN1 (114/140) SC CONT IN 114 SG, 1-78
CN1 (113/140) SC CONT (G) 113
CN1 (105/140) INT/EXT IN 105 SG, 1-35
CN1 (67/140) 2FH IN 67 SG, 1-47
CN1 (65/140) LALT IN 65 SG, 1-46
CN1 (63/140) FLD1 IN 63 SG, 1-45
CN1 (61/140) BLKG IN 61 SG, 1-44
CN1 (59/140) BF IN 59 SG, 1-43
CN1 (57/140) SYNC IN 57 SG, 1-42
CN1 (55/140) VD IN 55 SG, 1-41
CN1 (53/140) HD IN 53 SG, 1-40
CN1 (51/140) NRW BLKG IN 51 SG, 1-39
CN1 (44/140) CHAR VF IN 44 AT, 1-28
CN1 (46/140) CHAR BACK IN 46 AT, 1-27
CN1 (40/140) TITLE IN 40 AT, 1-26
CN1 (42/140) TITLE BACK IN 42 AT, 1-25

NOTE
*1

REF. NO.	CHANGE INFORMATION	SERIAL NO.
C307	ADD	15671- (BVP-570) 55211- (BVP-570WSPK)
D10	ADD	15491- (BVP-570) 55211- (BVP-570WSPK)
R510	ADD	

NOTE:
NM: NO MOUNT

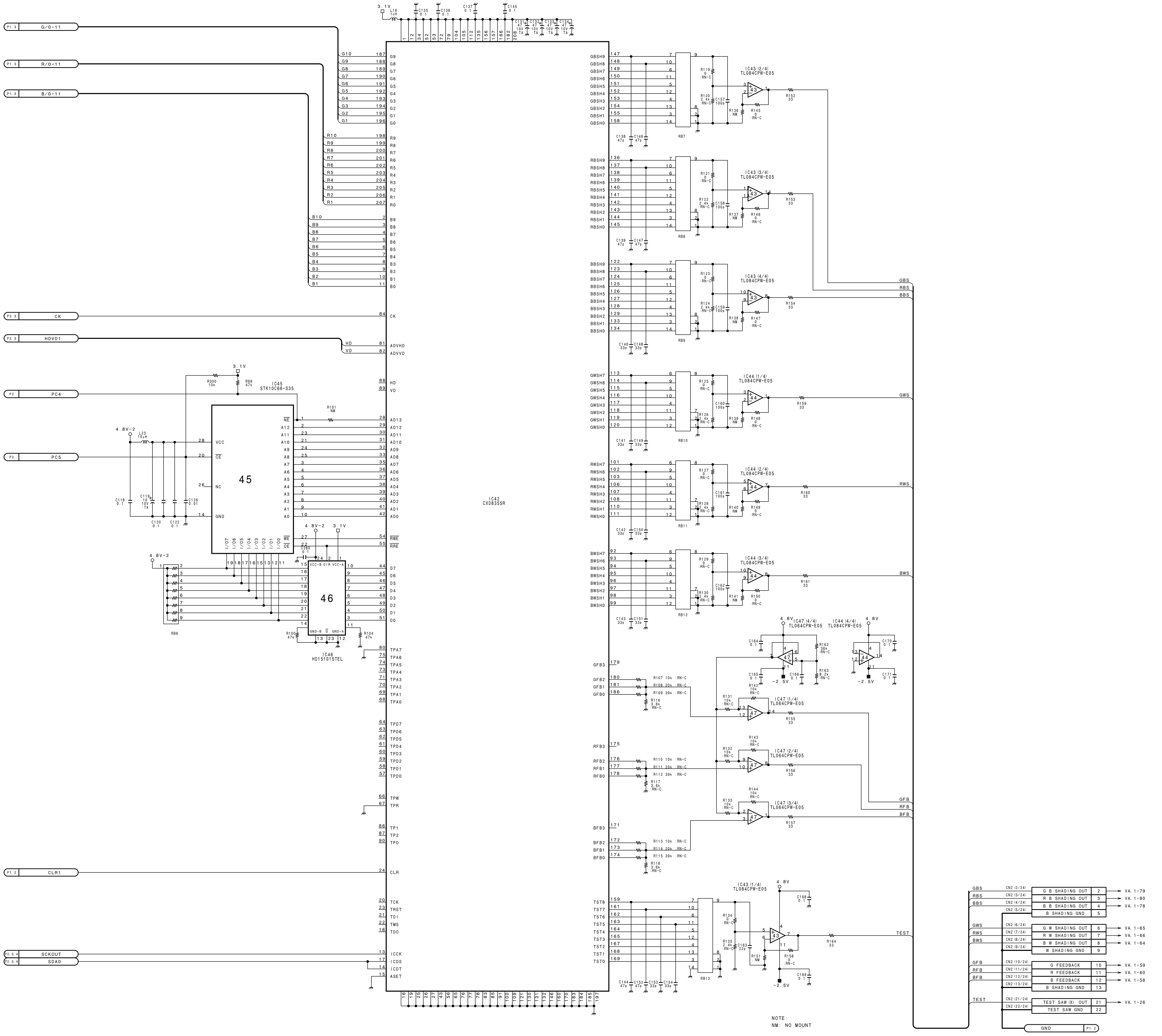
PR-242 (4/5)

BOARD NO. 1-669-860-11
LOT NO. 803-
B-¥BKP5090-PR242-11

I J K L M N O P

PR-242 (5/5)

BVP-570 (SY)



P1.3 G/O-11
P1.3 R/O-11
P1.3 B/O-11
P2.3 CK
P2.3 HDVD1
P2 PC4
P2 PC5
P1.2 CLR1
P2.3.4 SCKOUT
P2.3.4 SDAO
3.1V
L16 1μH
C135 0.1
C136 0.1
C137 0.1
C145 0.1
IC42 CXD8355R
G9 G8 G7 G6 G5 G4 G3 G2 G1 G0
R9 R8 R7 R6 R5 R4 R3 R2 R1 R0
B9 B8 B7 B6 B5 B4 B3 B2 B1 B0
CK
ADVHD
ADVVD
HD
VD
AD13 AD12 AD11 AD10 AD9 AD8 AD7 AD6 AD5 AD4 AD3 AD2 AD1 AD0
RWE
RRE
D7 D6 D5 D4 D3 D2 D1 D0
TPA7 TPA6 TPA5 TPA4 TPA3 TPA2 TPA1 TPA0
TPD7 TPD6 TPD5 TPD4 TPD3 TPD2 TPD1 TPD0
TPW
TPR
TP1 TP2 TP0
CLR
TCK TRST TDI TMS TDO
ICCK ICDS ICDT ASET
IC45 STK10C68-S35
45
VCC
CE
NC
GND
NE
WE
OE
4.8V-2
L23 10μH
C119 10 10V TA
C118 0.1
C120 0.1
C122 0.1
C126 0.01
R300 10k
R99 47k
R101 NM
IC46 HD151015TEL
46
RB6
R100 47k
R104 47k
C180 0.1
GBSH9 GBSH8 GBSH7 GBSH6 GBSH5 GBSH4 GBSH3 GBSH2 GBSH1 GBSH0
RBSH9 RBSH8 RBSH7 RBSH6 RBSH5 RBSH4 RBSH3 RBSH2 RBSH1 RBSH0
BBSH9 BBSH8 BBSH7 BBSH6 BBSH5 BBSH4 BBSH3 BBSH2 BBSH1 BBSH0
GWSH7 GWSH6 GWSH5 GWSH4 GWSH3 GWSH2 GWSH1 GWSH0
RWSH7 RWSH6 RWSH5 RWSH4 RWSH3 RWSH2 RWSH1 RWSH0
BWSH7 BWSH6 BWSH5 BWSH4 BWSH3 BWSH2 BWSH1 BWSH0
GFB3 GFB2 GFB1 GFB0
RFB3 RFB2 RFB1 RFB0
BFB3 BFB2 BFB1 BFB0
TST8 TST7 TST6 TST5 TST4 TST3 TST2 TST1 TST0
RB7 RB8 RB9 RB10 RB11 RB12 RB13
IC43 (2/4) TL084CPW-E05
IC43 (3/4) TL084CPW-E05
IC43 (4/4) TL084CPW-E05
IC44 (1/4) TL084CPW-E05
IC44 (2/4) TL084CPW-E05
IC44 (3/4) TL084CPW-E05
IC44 (4/4) TL084CPW-E05
IC47 (1/4) TL064CPW-E05
IC47 (2/4) TL064CPW-E05
IC47 (3/4) TL064CPW-E05
IC47 (4/4) TL064CPW-E05
IC43 (1/4) TL084CPW-E05
4.8V
-2.5V
R152 33
R153 33
R154 33
R159 33
R160 33
R161 33
R155 33
R156 33
R157 33
R164 33
R107 10k RN-C
R108 20k RN-C
R109 39k RN-C
R110 10k RN-C
R111 20k RN-C
R112 39k RN-C
R113 10k RN-C
R114 20k RN-C
R115 39k RN-C
GBS
RBS
BBS
GWS
RWS
BWS
GFB
RFB
BFB
TEST
CN2 (2/24) G B SHADING OUT 2 VA, 1-79
CN2 (3/24) R B SHADING OUT 3 VA, 1-80
CN2 (4/24) B B SHADING OUT 4 VA, 1-78
CN2 (5/24) B SHADING GND 5
CN2 (6/24) G W SHADING OUT 6 VA, 1-65
CN2 (7/24) R W SHADING OUT 7 VA, 1-66
CN2 (8/24) B W SHADING OUT 8 VA, 1-64
CN2 (9/24) W SHADING GND 9
CN2 (10/24) G FEEDBACK 10 VA, 1-59
CN2 (11/24) R FEEDBACK 11 VA, 1-60
CN2 (12/24) B FEEDBACK 12 VA, 1-58
CN2 (13/24) B SHADING GND 13
CN2 (21/24) TEST SAW (X) OUT 21 VA, 1-26
CN2 (22/24) TEST SAW GND 22
GND P1, 2
NOTE:
NM: NO MOUNT
1
2
3
4
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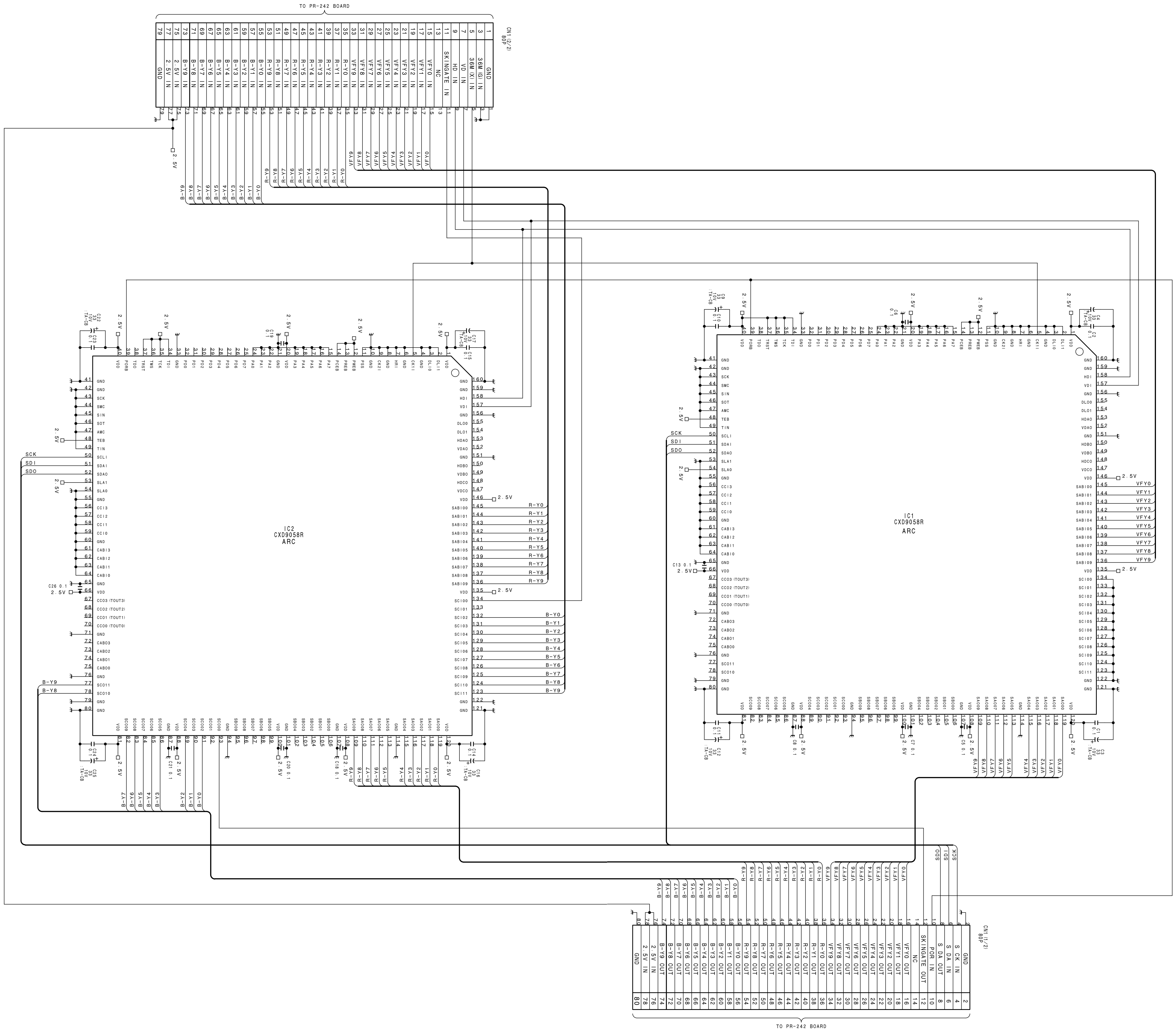
PR-242 (5/5)

BOARD NO. 1-669-860-11
LOT NO. 803-
B-¥BKP5090-PR242-11

9-26

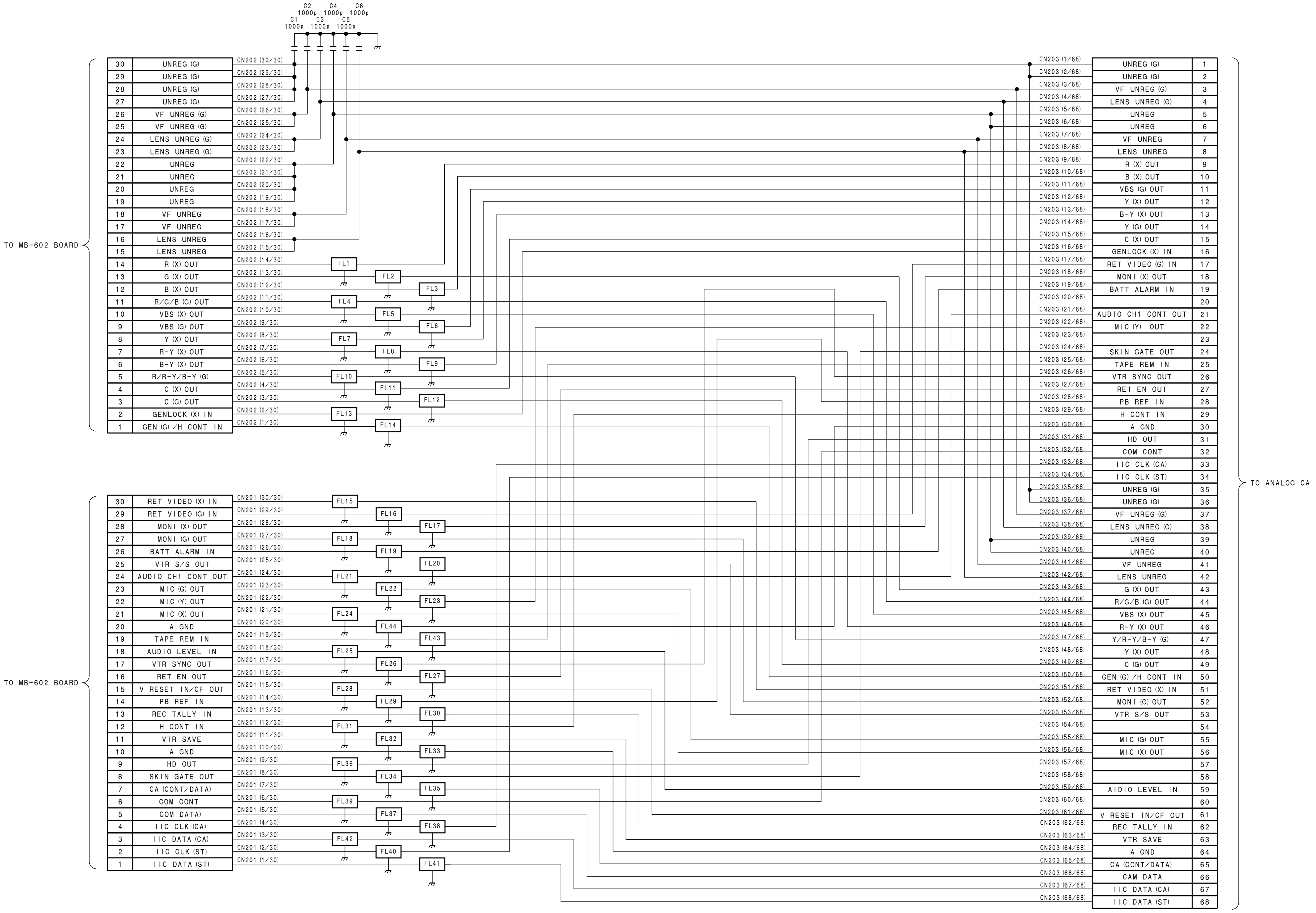
http://getMANUAL.com


TO PR-242 BOARD
CN1 (2/2) 80P
GND
36M (G) IN
36M (Y) IN
VD IN
HD IN
NC
SKINGATE IN
2.5V IN
IC2
CXD9058R
ARC
IC1
CXD9058R
ARC
SCK
SDI
SDO
2.5V
CN1 (1/2) 80P
S CK IN
S DA IN
S DA OUT
POR IN
SKINGATE OUT
TO PR-242 BOARD

1
2
3
4
5

PR-243

BOARD NO. 1-669-861-11
LOT NO. 803-
B-¥BKP5091-PR243-11


C1 1000p
C2 1000p
C3 1000p
C4 1000p
C5 1000p
C6 1000p
TO MB-602 BOARD
30 UNREG (G) CN202 (30/30)
29 UNREG (G) CN202 (29/30)
28 UNREG (G) CN202 (28/30)
27 UNREG (G) CN202 (27/30)
26 VF UNREG (G) CN202 (26/30)
25 VF UNREG (G) CN202 (25/30)
24 LENS UNREG (G) CN202 (24/30)
23 LENS UNREG (G) CN202 (23/30)
22 UNREG CN202 (22/30)
21 UNREG CN202 (21/30)
20 UNREG CN202 (20/30)
19 UNREG CN202 (19/30)
18 VF UNREG CN202 (18/30)
17 VF UNREG CN202 (17/30)
16 LENS UNREG CN202 (16/30)
15 LENS UNREG CN202 (15/30)
14 R (X) OUT CN202 (14/30)
13 G (X) OUT CN202 (13/30)
12 B (X) OUT CN202 (12/30)
11 R/G/B (G) OUT CN202 (11/30)
10 VBS (X) OUT CN202 (10/30)
9 VBS (G) OUT CN202 (9/30)
8 Y (X) OUT CN202 (8/30)
7 R-Y (X) OUT CN202 (7/30)
6 B-Y (X) OUT CN202 (6/30)
5 R/R-Y/B-Y (G) CN202 (5/30)
4 C (X) OUT CN202 (4/30)
3 C (G) OUT CN202 (3/30)
2 GENLOCK (X) IN CN202 (2/30)
1 GEN (G) /H CONT IN CN202 (1/30)
TO MB-602 BOARD
30 RET VIDEO (X) IN CN201 (30/30)
29 RET VIDEO (G) IN CN201 (29/30)
28 MONI (X) OUT CN201 (28/30)
27 MONI (G) OUT CN201 (27/30)
26 BATT ALARM IN CN201 (26/30)
25 VTR S/S OUT CN201 (25/30)
24 AUDIO CH1 CONT OUT CN201 (24/30)
23 MIC (G) OUT CN201 (23/30)
22 MIC (Y) OUT CN201 (22/30)
21 MIC (X) OUT CN201 (21/30)
20 A GND CN201 (20/30)
19 TAPE REM IN CN201 (19/30)
18 AUDIO LEVEL IN CN201 (18/30)
17 VTR SYNC OUT CN201 (17/30)
16 RET EN OUT CN201 (16/30)
15 V RESET IN/CF OUT CN201 (15/30)
14 PB REF IN CN201 (14/30)
13 REC TALLY IN CN201 (13/30)
12 H CONT IN CN201 (12/30)
11 VTR SAVE CN201 (11/30)
10 A GND CN201 (10/30)
9 HD OUT CN201 (9/30)
8 SKIN GATE OUT CN201 (8/30)
7 CA (CONT/DATA) CN201 (7/30)
6 COM CONT CN201 (6/30)
5 COM DATA) CN201 (5/30)
4 IIC CLK (CA) CN201 (4/30)
3 IIC DATA (CA) CN201 (3/30)
2 IIC CLK (ST) CN201 (2/30)
1 IIC DATA (ST) CN201 (1/30)
FL1
FL2
FL3
FL4
FL5
FL6
FL7
FL8
FL9
FL10
FL11
FL12
FL13
FL14
FL15
FL16
FL17
FL18
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FL23
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FL44
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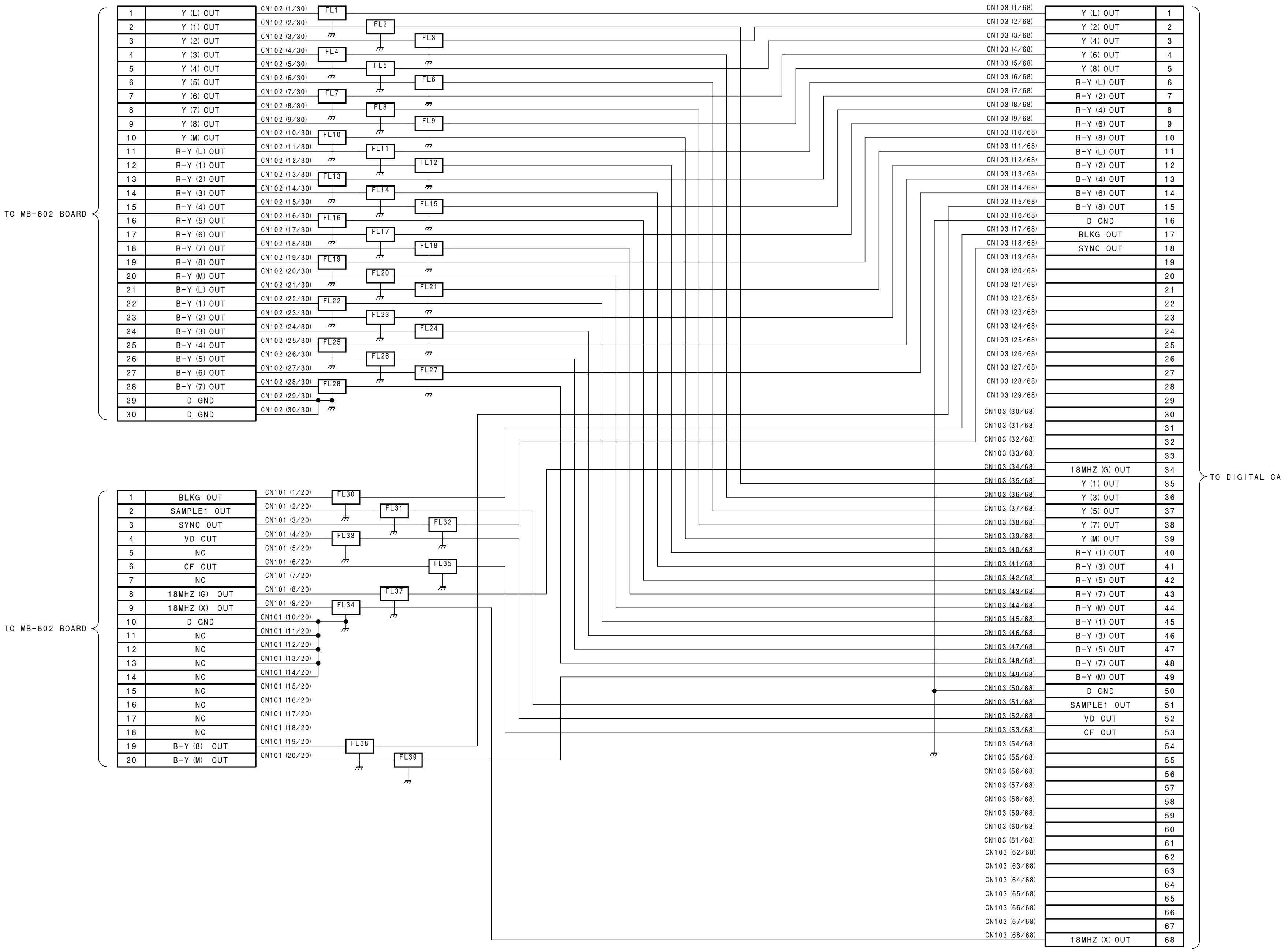
FL29
FL30
FL31
FL32
FL33
FL36
FL34
FL35
FL39
FL37
FL38
FL42
FL40
FL41
CN203 (1/68) UNREG (G) 1
CN203 (2/68) UNREG (G) 2
CN203 (3/68) VF UNREG (G) 3
CN203 (4/68) LENS UNREG (G) 4
CN203 (5/68) UNREG 5
CN203 (6/68) UNREG 6
CN203 (7/68) VF UNREG 7
CN203 (8/68) LENS UNREG 8
CN203 (9/68) R (X) OUT 9
CN203 (10/68) B (X) OUT 10
CN203 (11/68) VBS (G) OUT 11
CN203 (12/68) Y (X) OUT 12
CN203 (13/68) B-Y (X) OUT 13
CN203 (14/68) Y (G) OUT 14
CN203 (15/68) C (X) OUT 15
CN203 (16/68) GENLOCK (X) IN 16
CN203 (17/68) RET VIDEO (G) IN 17
CN203 (18/68) MONI (X) OUT 18
CN203 (19/68) BATT ALARM IN 19
CN203 (20/68) 20
CN203 (21/68) AUDIO CH1 CONT OUT 21
CN203 (22/68) MIC (Y) OUT 22
CN203 (23/68) 23
CN203 (24/68) SKIN GATE OUT 24
CN203 (25/68) TAPE REM IN 25
CN203 (26/68) VTR SYNC OUT 26
CN203 (27/68) RET EN OUT 27
CN203 (28/68) PB REF IN 28
CN203 (29/68) H CONT IN 29
CN203 (30/68) A GND 30
CN203 (31/68) HD OUT 31
CN203 (32/68) COM CONT 32
CN203 (33/68) IIC CLK (CA) 33
CN203 (34/68) IIC CLK (ST) 34
CN203 (35/68) UNREG (G) 35
CN203 (36/68) UNREG (G) 36
CN203 (37/68) VF UNREG (G) 37
CN203 (38/68) LENS UNREG (G) 38
CN203 (39/68) UNREG 39
CN203 (40/68) UNREG 40
CN203 (41/68) VF UNREG 41
CN203 (42/68) LENS UNREG 42
CN203 (43/68) G (X) OUT 43
CN203 (44/68) R/G/B (G) OUT 44
CN203 (45/68) VBS (X) OUT 45
CN203 (46/68) R-Y (X) OUT 46
CN203 (47/68) Y/R-Y/B-Y (G) 47
CN203 (48/68) Y (X) OUT 48
CN203 (49/68) C (G) OUT 49
CN203 (50/68) GEN (G) /H CONT IN 50
CN203 (51/68) RET VIDEO (X) IN 51
CN203 (52/68) MONI (G) OUT 52
CN203 (53/68) VTR S/S OUT 53
CN203 (54/68) 54
CN203 (55/68) MIC (G) OUT 55
CN203 (56/68) MIC (X) OUT 56
CN203 (57/68) 57
CN203 (58/68) 58
CN203 (59/68) AIDIO LEVEL IN 59
CN203 (60/68) 60
CN203 (61/68) V RESET IN/CF OUT 61
CN203 (62/68) REC TALLY IN 62
CN203 (63/68) VTR SAVE 63
CN203 (64/68) A GND 64
CN203 (65/68) CA (CONT/DATA) 65
CN203 (66/68) CAM DATA 66
CN203 (67/68) IIC DATA (CA) 67
CN203 (68/68) IIC DATA (ST) 68
TO ANALOG CA

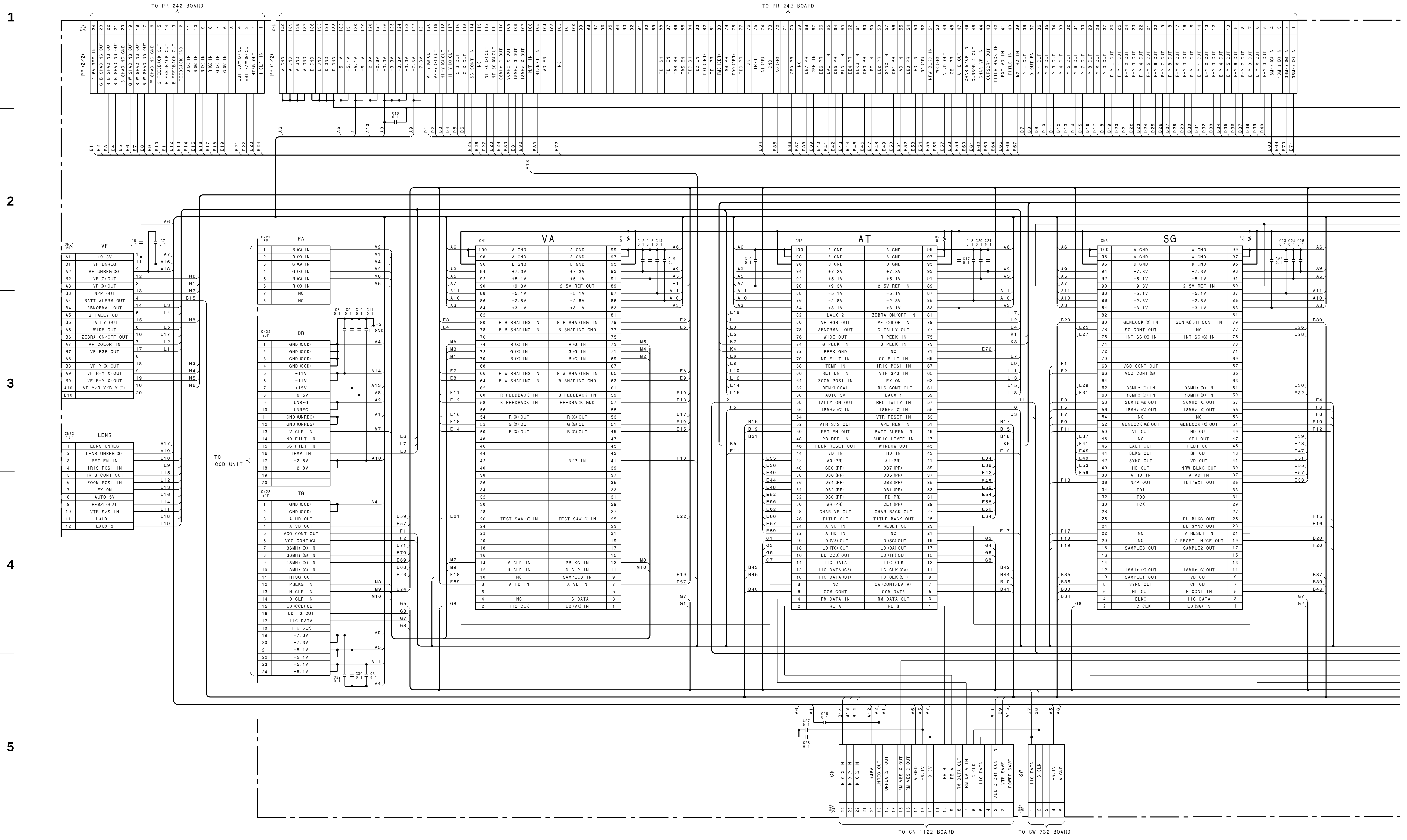
CN-1120
BOARD NO. 1-657-440-21
LOT NO. 803-


TO MB-602 BOARD
1 Y (L) OUT
2 Y (1) OUT
3 Y (2) OUT
4 Y (3) OUT
5 Y (4) OUT
6 Y (5) OUT
7 Y (6) OUT
8 Y (7) OUT
9 Y (8) OUT
10 Y (M) OUT
11 R-Y (L) OUT
12 R-Y (1) OUT
13 R-Y (2) OUT
14 R-Y (3) OUT
15 R-Y (4) OUT
16 R-Y (5) OUT
17 R-Y (6) OUT
18 R-Y (7) OUT
19 R-Y (8) OUT
20 R-Y (M) OUT
21 B-Y (L) OUT
22 B-Y (1) OUT
23 B-Y (2) OUT
24 B-Y (3) OUT
25 B-Y (4) OUT
26 B-Y (5) OUT
27 B-Y (6) OUT
28 B-Y (7) OUT
29 D GND
30 D GND
CN102 (1/30) … CN102 (30/30)
FL1 … FL28
TO MB-602 BOARD
1 BLKG OUT
2 SAMPLE1 OUT
3 SYNC OUT
4 VD OUT
5 NC
6 CF OUT
7 NC
8 18MHZ (G) OUT
9 18MHZ (X) OUT
10 D GND
11 NC
12 NC
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 B-Y (8) OUT
20 B-Y (M) OUT
CN101 (1/20) … CN101 (20/20)
FL30 FL31 FL32 FL33 FL34 FL35 FL37 FL38 FL39
CN103 (1/68) … CN103 (68/68)
Y (L) OUT 1
Y (2) OUT 2
Y (4) OUT 3
Y (6) OUT 4
Y (8) OUT 5
R-Y (L) OUT 6
R-Y (2) OUT 7
R-Y (4) OUT 8
R-Y (6) OUT 9
R-Y (8) OUT 10
B-Y (L) OUT 11
B-Y (2) OUT 12
B-Y (4) OUT 13
B-Y (6) OUT 14
B-Y (8) OUT 15
D GND 16
BLKG OUT 17
SYNC OUT 18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
18MHZ (G) OUT 34
Y (1) OUT 35
Y (3) OUT 36
Y (5) OUT 37
Y (7) OUT 38
Y (M) OUT 39
R-Y (1) OUT 40
R-Y (3) OUT 41
R-Y (5) OUT 42
R-Y (7) OUT 43
R-Y (M) OUT 44
B-Y (1) OUT 45
B-Y (3) OUT 46
B-Y (5) OUT 47
B-Y (7) OUT 48
B-Y (M) OUT 49
D GND 50
SAMPLE1 OUT 51
VD OUT 52
CF OUT 53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
18MHZ (X) OUT 68
TO DIGITAL CA

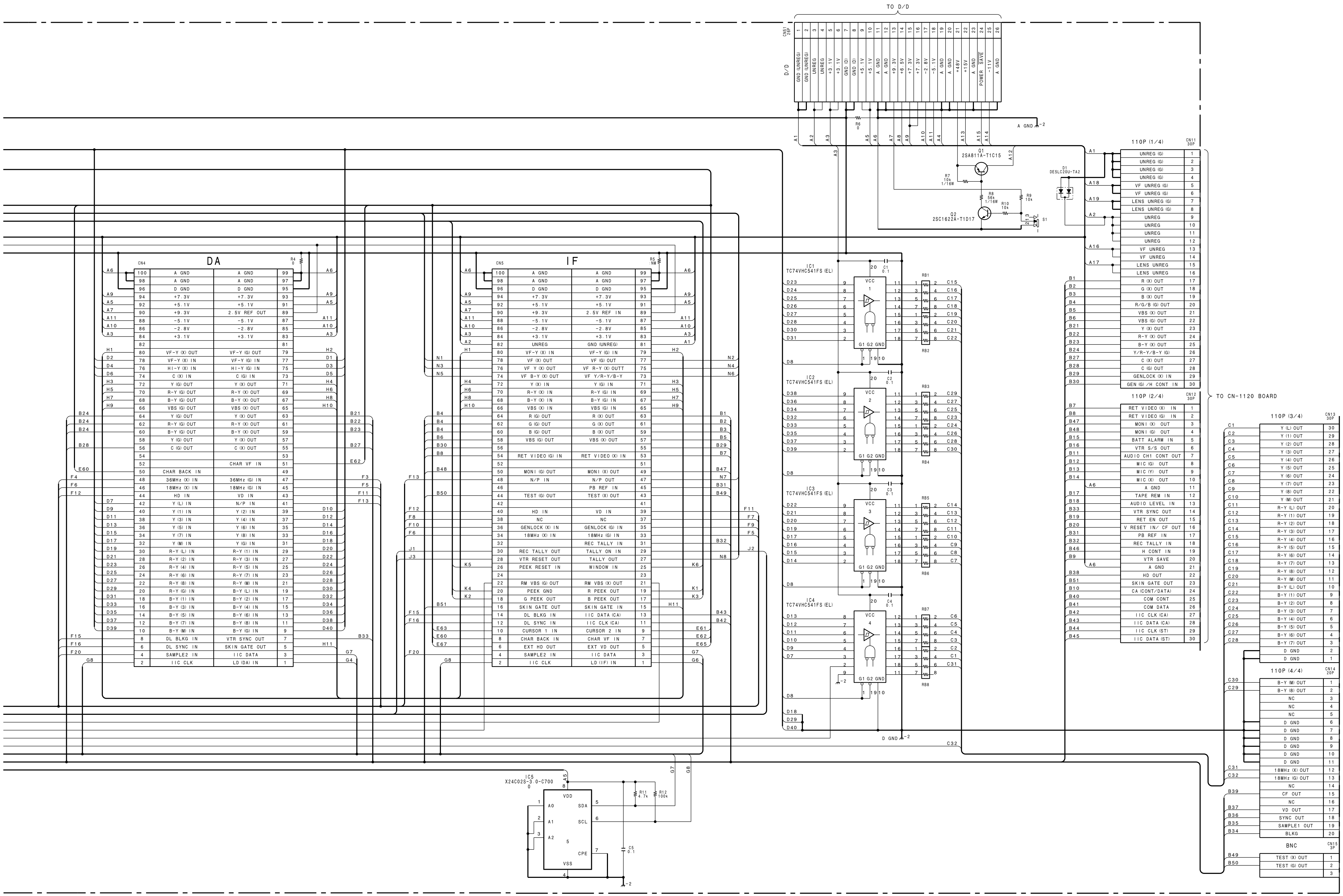
CN-1121

BOARD NO. 1-657-441-21
LOT NO. 803-
B-¥BVP550-CN1121-11

BVP-570 (SY)


TO PR-242 BOARD
TO PR-242 BOARD
PR (2/2)
PR (1/2)
VF
LENS
TO CCD UNIT
PA
DR
TG
VA
AT
SG
CN
SW
TO CN-1122 BOARD
TO SW-732 BOARD.
1
2
3
4
5

A B C D E F G H


TO D/D
D/D
CN51 28P
A GND
110P (1/4)
CN11 30P
110P (2/4)
CN12 30P
110P (3/4)
CN13 30P
110P (4/4)
CN14 20P
BNC
CN15 3P
TO CN-1120 BOARD
TO CN-1121 BOARD
DA
CN4
IF
CN5
Q1 2SA811A-T1C15
Q2 2SC1622A-T1D17
D1 DE5LC30U-TA2
S1
IC1 TC74VHC541FS(EL)
IC2 TC74VHC541FS(EL)
IC3 TC74VHC541FS(EL)
IC4 TC74VHC541FS(EL)
IC5 X24C02S-3.0-C700
RB1
RB2
RB3
RB4
RB5
RB6
RB7
RB8
D GND

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3

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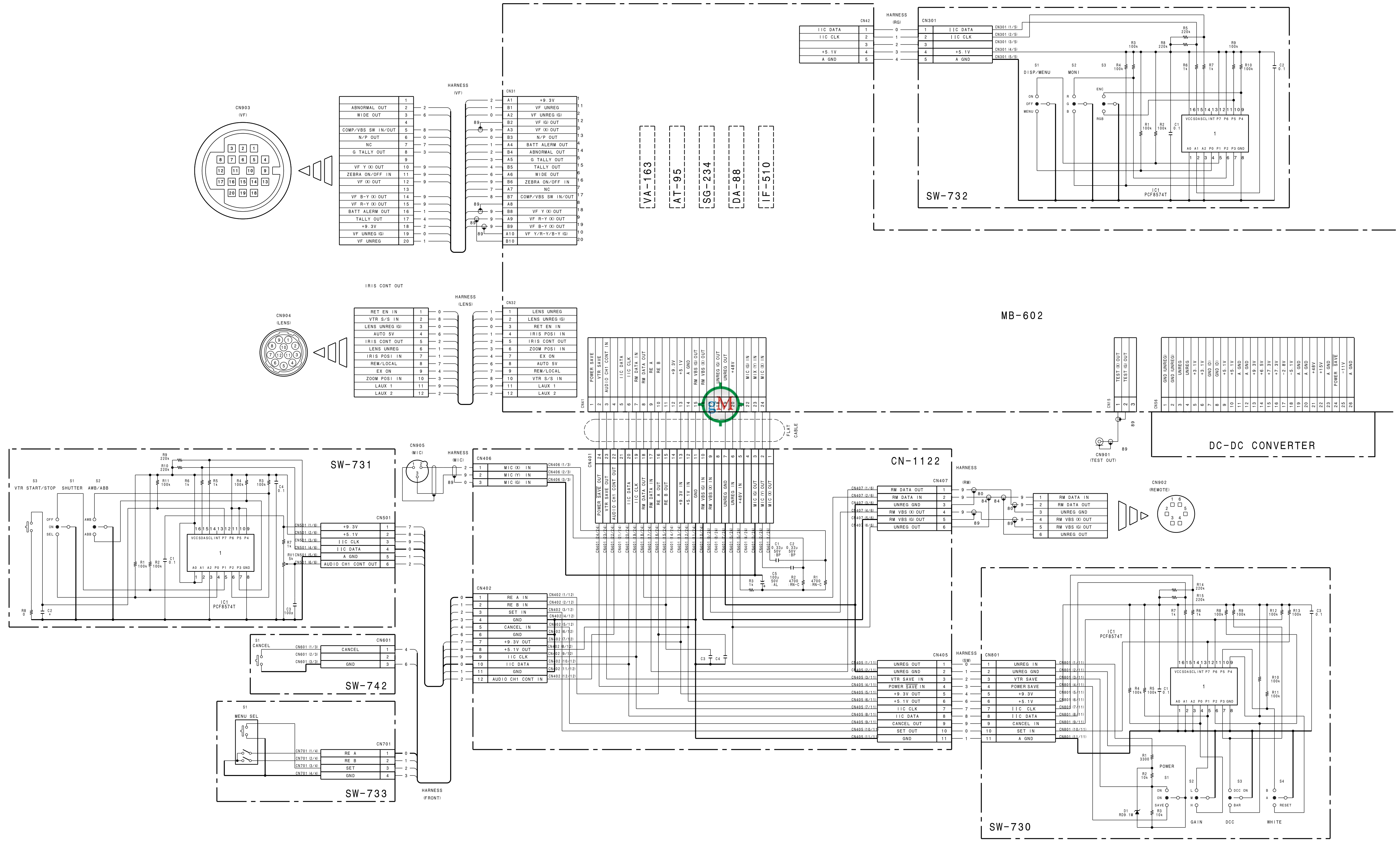
5

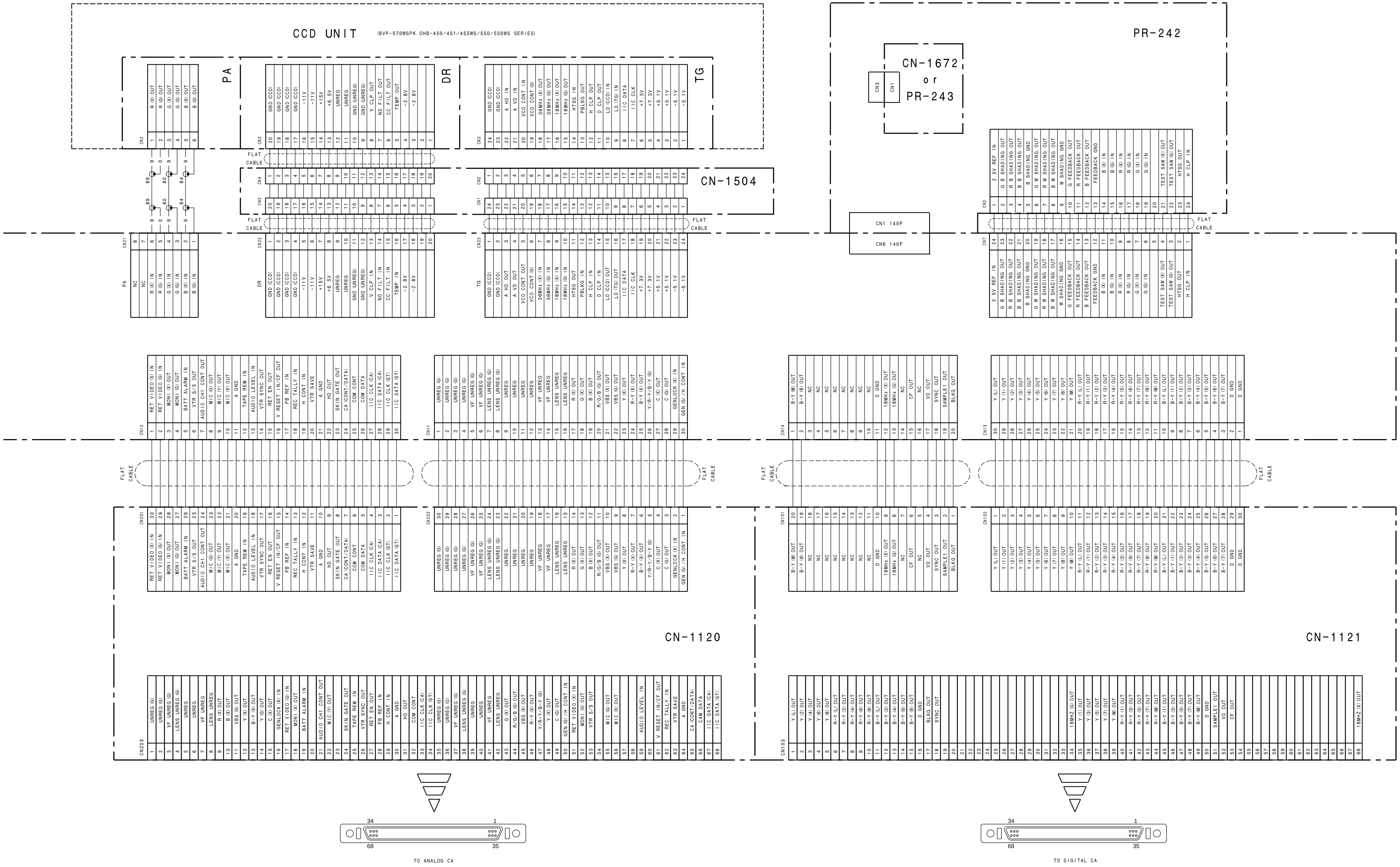
MB-602

BOARD NO. 1-657-437-21
LOT NO. 803-

I J K L M N O P

BVP-570 (SY)


CN903 (VF)
HARNESS (VF)
CN31
CN904 (LENS)
HARNESS (LENS)
CN32
IRIS CONT OUT
VA-163
AT-95
SG-234
DA-88
IF-510
CN42
HARNESS (RG)
CN301
SW-732
S1 DISP/MENU
S2 MONI
S3
IC1 PCF8574T
MB-602
CN41
CN15
CN56
TEST (X) OUT
TEST (G) OUT
DC-DC CONVERTER
CN901 (TEST OUT)
FLAT CABLE
SW-731
S3 VTR START/STOP
S1 SHUTTER
S2 AWB/ABB
CN501
CN905 (MIC)
HARNESS (MIC)
CN406
CN401
CN-1122
CN407
HARNESS (RM)
CN902 (REMOTE)
CN402
SW-742
S1 CANCEL
CN601
SW-733
S1 MENU SEL
CN701
HARNESS (FRONT)
CN405
HARNESS (SW)
CN801
SW-730
S1 POWER
S2 GAIN
S3 DCC
S4 WHITE
1
2
3
4
5
A
B
C
D
E
F
G
H


CCD UNIT
(BVP-570WSPK, OHB-450/451/455WS/550/550WS SERIES)
PA
DR
TG
CN-1504
PR-242
CN-1672
or
PR-243
CN1 140P
CN6 140P
FLAT CABLE
CN-1120
CN-1121
TO ANALOG CA
TO DIGITAL CA

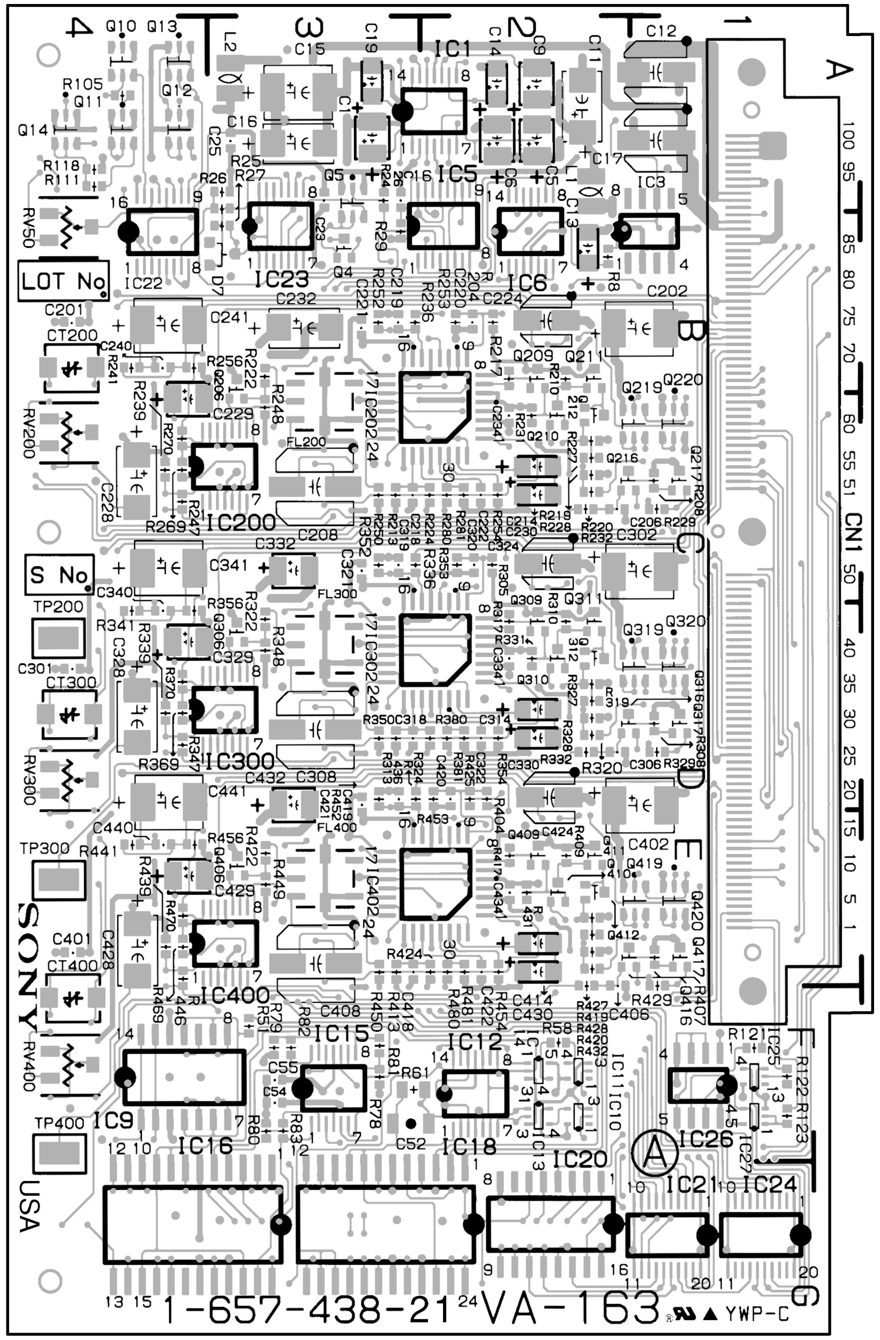
Frame
CN-1122/1142/1504/1672
SW-730/731/732/733/742
LOT NO. 803-

Section 10

Board Layouts

VA-163A(1-657-438-21)

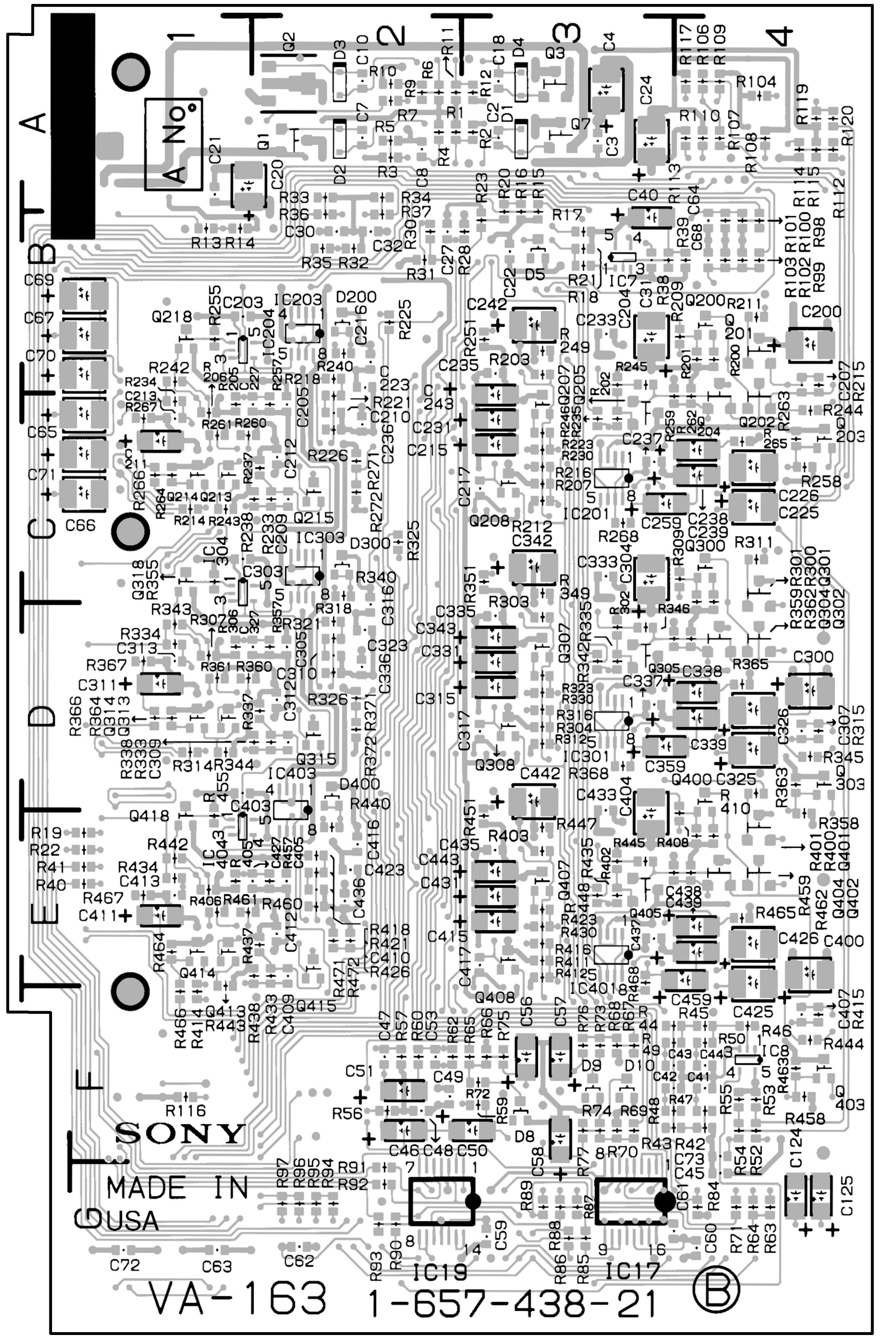
CN1	C1
CT200	B4
CT300	D4
CT400	F4
C1	A3
C2	*A3
C3	*A3
C4	*A3
C5	A2
C6	A2
C7	*A2
C8	*A2
C9	A2
C10	*A2
C11	A2
C12	A1
C13	B2
C14	A2
C15	A3
C16	A3
C17	A1
C18	*A3
C19	A3
C20	*A1
C21	*A1
C22	*B3
C23	A3
C24	*A3
C25	A3
C26	A3
C27	*B2
C30	*B2
C31	*B3
C32	*B2
C40	*B3
C41	*F4
C42	*F3
C43	*F3
C44	*F4
C45	*G4
C46	*F2
C47	*F2
C48	*F2
C49	*F2
C50	*F3
C51	*F2
C52	F3
C53	*F2
C54	F3
C55	F3
C56	*F3
C57	*F3
C58	*F3
C59	*G3
C60	*G4
C61	*G3
C62	*G2
C63	*G1
C64	*B4
C65	*C1
C66	*C1
C67	*B1
C68	*B4
C69	*B1
C70	*B1
C71	*C1
C72	*G1
C73	*F4
C124	*G4
C125	*G4
C200	*B4
C201	B4
C202	B1
C203	*B1
C204	*B3
C205	*C2
C207	*B4
C208	C3
C209	*C2
C211	*C1
C212	*C2
C214	C2
C215	*C3
C216	*B2
C217	*C3
C218	C3
C219	B3
C220	B2
C221	B3
C223	*B2
C224	B2
C225	*C4
C226	*C4
C227	*C2
C228	C4
C229	C4
C230	C2
C231	*C3
C232	B3
C233	*B3
C234	C2
C235	*B3
C236	*C2
C237	*C3
C238	*C4
C239	*C4
C240	B4
C242	*B3
C243	*C3
C259	*C3
C300	*D4
C301	D4
C302	C1
C303	*C1
C304	*C3
C305	*D2
C307	*D4
C308	D3
C309	*D2
C311	*D1
C312	*D2
C314	D2
C315	*D3
C316	*D2
C317	*D3
C318	D3
C319	C3
C320	C2
C321	C3
C323	*D2
C324	C2
C325	*D4
C326	*D4
C327	*D2
C328	D4
C329	D4
C330	D2
C331	*D3
C332	C3
C333	*C3
C334	D2
C335	*D3
C336	*D2
C337	*D3
C338	*D4
C339	*D4
C340	D4
C342	*C3
C343	*D3
C359	*D3
C400	*E4
C401	E4
C402	D1
C403	*D1
C404	*E3
C405	*E2
C407	*F4
C408	E3
C409	*E2
C411	*E1
C412	*E2
C414	E2
C415	*E3
C416	*E2
C417	*E3
C418	E3
C419	D3
C420	D2
C421	D3
C423	*E2
C424	D2
C425	*E4
C426	*E4
C427	*E2
C428	E4
C429	E4
C430	E2
C431	*E3
C432	D3
C433	*D3
C434	E2
C435	*E3
C436	*E2
C437	*E3
C438	*E4
C439	*E4
C440	E4
C442	*D3
C443	*E3
C459	*E4
D1	*A3
D2	*A2
D3	*A2
D4	*A3
D5	*B3
D7	B3
D8	*F3
D9	*F3
D10	*F3
FL200	C3
FL300	D3
FL400	E3
IC1	A3
IC3	B2
IC5	B3
IC6	B2
IC7	*B3
IC8	*F4
IC9	F4
IC10	F2
IC11	F2
IC12	F2
IC13	F2
IC14	F2
IC15	F3
IC16	G3
IC17	*G3
IC18	G2
IC19	*G3
IC20	G2
IC21	G1
IC22	B4
IC23	B3
IC24	G1
IC25	F1
IC26	F1
IC27	F1
IC200	C4
IC201	*C3
IC202	C2
IC203	*B2
IC204	*B1
IC300	D4
IC301	*D3
IC302	D2
IC303	*C2
IC304	*C1
IC400	E4
IC401	*E3
IC402	E2
IC403	*D2
IC404	*E1
L1	A2
L2	A3
Q1	*A2
Q2	*A2
Q3	*A3
Q4	B3
Q5	A3
Q7	*A3
Q10	A4
Q11	A4
Q12	A4
Q13	A4
Q14	A4
Q200	*B4
Q201	*B4
Q202	*C4
Q203	*C4
Q204	*C4
Q205	*C3
Q206	B3
Q207	*C3
Q208	*C3
Q209	B2
Q210	C2
Q211	B2
Q213	*C1
Q214	*C1
Q215	*C2
Q216	C2
Q217	C1
Q218	*B1
Q219	C1
Q220	C1
Q300	*C4
Q301	*C4
Q302	*D4
Q303	*D4
Q304	*D4
Q305	*D3
Q306	D3
Q307	*D3
Q308	*D3
Q309	D2
Q310	D2
Q311	D2
Q313	*D1
Q314	*D1
Q315	*D2
Q316	D2
Q317	D1
Q318	*C1
Q319	D1
Q320	D1
Q400	*D4
Q401	*E4
Q402	*E4
Q403	*F4
Q404	*E4
Q405	*E3
Q406	E3
Q407	*E3
Q408	*E3
Q409	E2
Q410	E2
Q411	E2
Q413	*E1
Q414	*E1
Q415	*E2
Q416	E2
Q417	E1
Q418	*E1
Q419	E1
Q420	E1
RV50	B4
RV200	C4
RV300	D4
RV400	F4
R1	*A2
R2	*A3
R3	*A2
R4	*A2
R5	*A2
R6	*A2
R7	*A2
R8	B2
R9	*A2
R10	*A2
R11	*A2
R12	*A3
R13	*B1
R14	*B1
R15	*A3
R16	*A3
R17	*B3
R18	*B3
R19	*E1
R20	*A3
R21	*B3
R22	*E1
R23	*B3
R24	A3
R25	A3
R26	A3
R27	B3
R28	*B3
R29	B3
R30	*B2
R31	*B2
R35	*B2
R36	*B2
R37	*B2
R38	*B3
R39	*B4
R40	*E1
R41	*E1
R42	*F4
R43	*F3



BVP-570 (SY)

VA-163A -A SIDE-

SUFFIX : -21



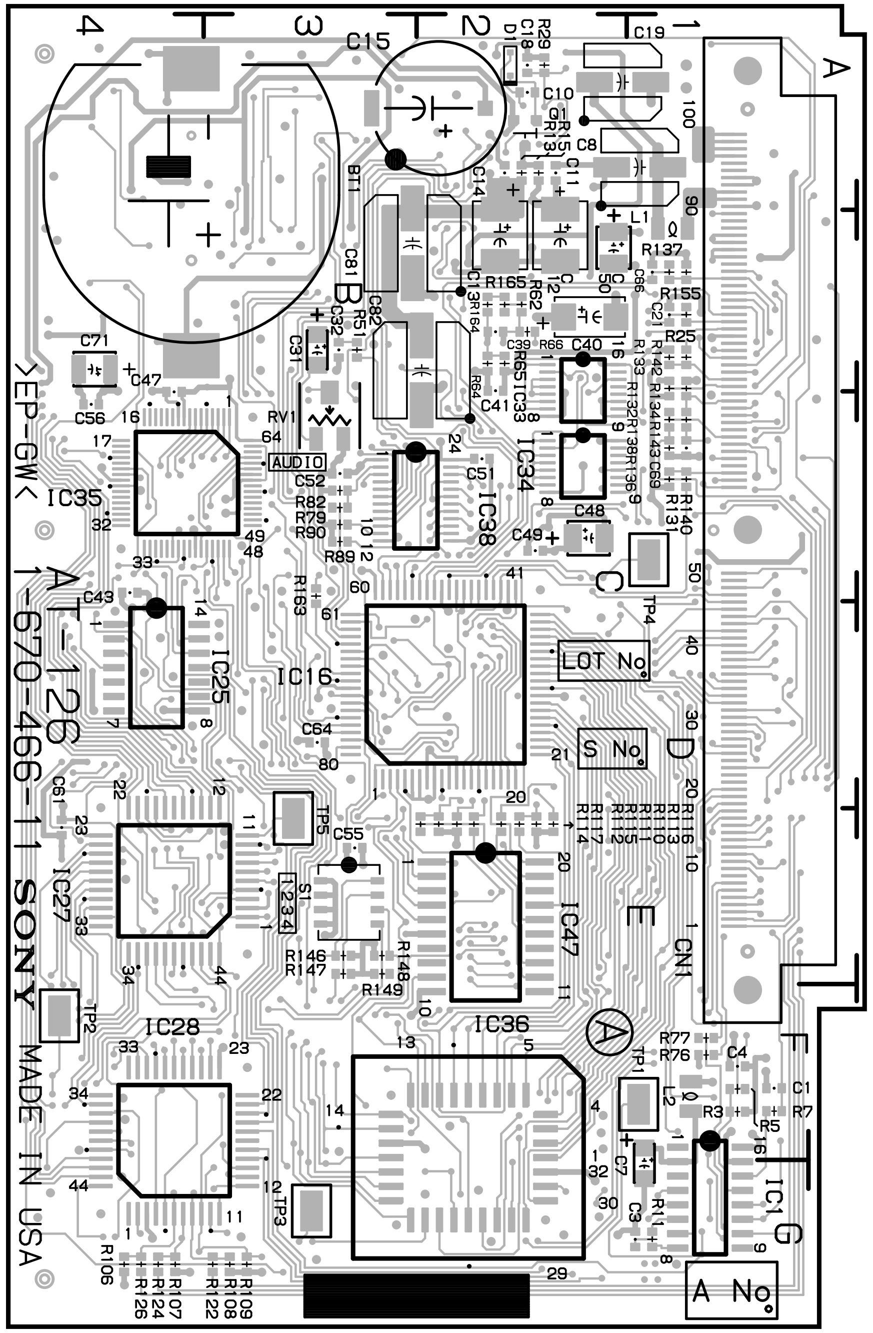
VA-163A -B SIDE-

SUFFIX : -21

R44	*F3
R45	*F4
R46	*F4
R47	*F4
R48	*F3
R49	*F3
R50	*F4
R51	F3
R52	*F4
R53	*F4
R54	*F4
R55	*F4
R56	*F2
R57	*F2
R58	F2
R59	*F3
R60	*F2
R61	F3
R62	*F2
R63	*G4
R64	*G4
R65	*F3
R66	*F3
R67	*F3
R68	*F3
R69	*F3
R70	*F3
R71	*G4
R72	*F3
R73	*F3
R74	*F3
R75	*F3
R76	*F3
R77	*F3
R78	F3
R79	F3
R80	F3
R81	F3
R82	F3
R83	F3
R84	*G4
R85	*G3
R86	*G3
R87	*G3
R88	*G3
R89	*G3
R90	*G2
R91	*G2
R92	*G2
R93	*G2
R94	*G2
R95	*G2
R96	*G2
R97	*G2
R98	*B4
R99	*B4
R100	*B4
R101	*B4
R102	*B4
R103	*B4
R104	*A4
R105	A4
R106	*A4
R107	*A4
R108	*A4
R109	*A4
R110	*A4
R111	A4
R112	*A4
R113	*A4
R114	*A4
R115	*A4
R116	*F1
R117	*A4
R118	A4
R120	*A4
R121	F1
R122	F1
R123	F1
R200	*B4
R201	*B4
R202	*B3
R203	*B3
R204	B2
R205	*C1
R206	*C1
R207	*C3
R208	C1
R209	*B4
R210	B2
R211	*B4
R212	*C3
R213	C3
R214	*C1
R215	*B4
R216	*C3
R217	B2
R218	*B2
R219	C2
R220	C2
R222	B3
R223	*C3
R224	C2
R225	*B2
R226	*C2
R227	C2
R228	C2
R229	C1
R230	*C3
R231	C2
R232	C2
R233	*C2
R234	*C1
R235	*C3
R236	B3
R237	*C2
R238	*C2
R239	C4
R240	*B2
R241	B4
R242	*B1
R243	*C1
R245	*B3
R246	*C3
R247	C4
R248	C3
R249	*B3
R250	C3
R251	*B3
R252	B3
R253	B2
R254	C2
R255	*B1
R256	B4
R257	*C2
R258	*C4
R259	*C3
R260	*C1
R261	*C1
R262	*C4
R263	*C4
R264	*C1
R265	*C4
R266	*C1
R267	*C1
R268	*C3
R269	C4
R270	C4
R271	*C2
R272	*C2
R280	C2
R281	C2
R300	*C4
R301	*C4
R302	*D3
R303	*D3
R304	*D3
R305	C2
R306	*D1
R307	*D1
R308	D1
R309	*C4
R310	D2
R311	*C4
R312	*D3
R313	D3
R314	*D1
R315	*D4
R316	*D3
R317	D2
R318	*D2
R319	D2
R320	D2
R322	D3
R323	*D3
R324	D2
R325	*C2
R326	*D2
R327	D2
R328	D2
R329	D1
R330	*D3
R331	D2
R332	D2
R333	*D2
R334	*D1
R335	*D3
R336	C3
R337	*D2
R338	*D2
R339	D4
R340	*C2
R341	D4
R342	*D3
R343	*D1
R344	*D1
R346	*D3
R347	D4
R348	D3
R349	*C3
R350	D3
R351	*C3
R352	C3
R353	C2
R354	D2
R355	*C1
R356	D4
R357	*D2
R358	*E4
R359	*D3
R360	*D1
R361	*D1
R362	*D4
R363	*D4
R364	*D1
R365	*D4
R366	*D1
R367	*D1
R368	*D3
R369	D4
R370	D4
R371	*D2
R372	*D2
R380	D2
R381	D2
R400	*E4
R401	*E4
R402	*E3
R403	*E3
R404	D2
R405	*E1
R406	*E1
R407	E1
R408	*E4
R409	E2
R410	*D4
R411	*E3
R412	*E3
R413	E3
R414	*F1
R415	*F4
R416	*E3
R417	E2
R418	*E2
R419	E2
R420	E2
R422	E3
R423	*E3
R424	E2
R425	D2
R426	*E2
R427	E2
R428	E2
R429	E1
R430	*E3
R431	E2
R432	E2
R433	*E2
R434	*E1
R435	*E3
R436	D3
R437	*E2
R438	*E2
R439	E4
R440	*E2
R441	E4
R442	*E1
R443	*E1
R445	*E3
R446	E4
R447	*E3
R448	*E3
R449	E3
R450	E3
R451	*E3
R452	D3
R453	D2
R454	E2
R455	*E1
R456	E4
R457	*E2
R458	*F4
R459	*E3
R460	*E1
R461	*E1
R462	*E4
R463	*F4
R464	*E1
R465	*E4
R466	*F1
R467	*E1
R468	*E3
R469	E4
R470	E4
R471	*E2
R472	*E2
R480	E2
R481	E2
TP200	D4
TP300	E4
TP400	F4

*: B SIDE

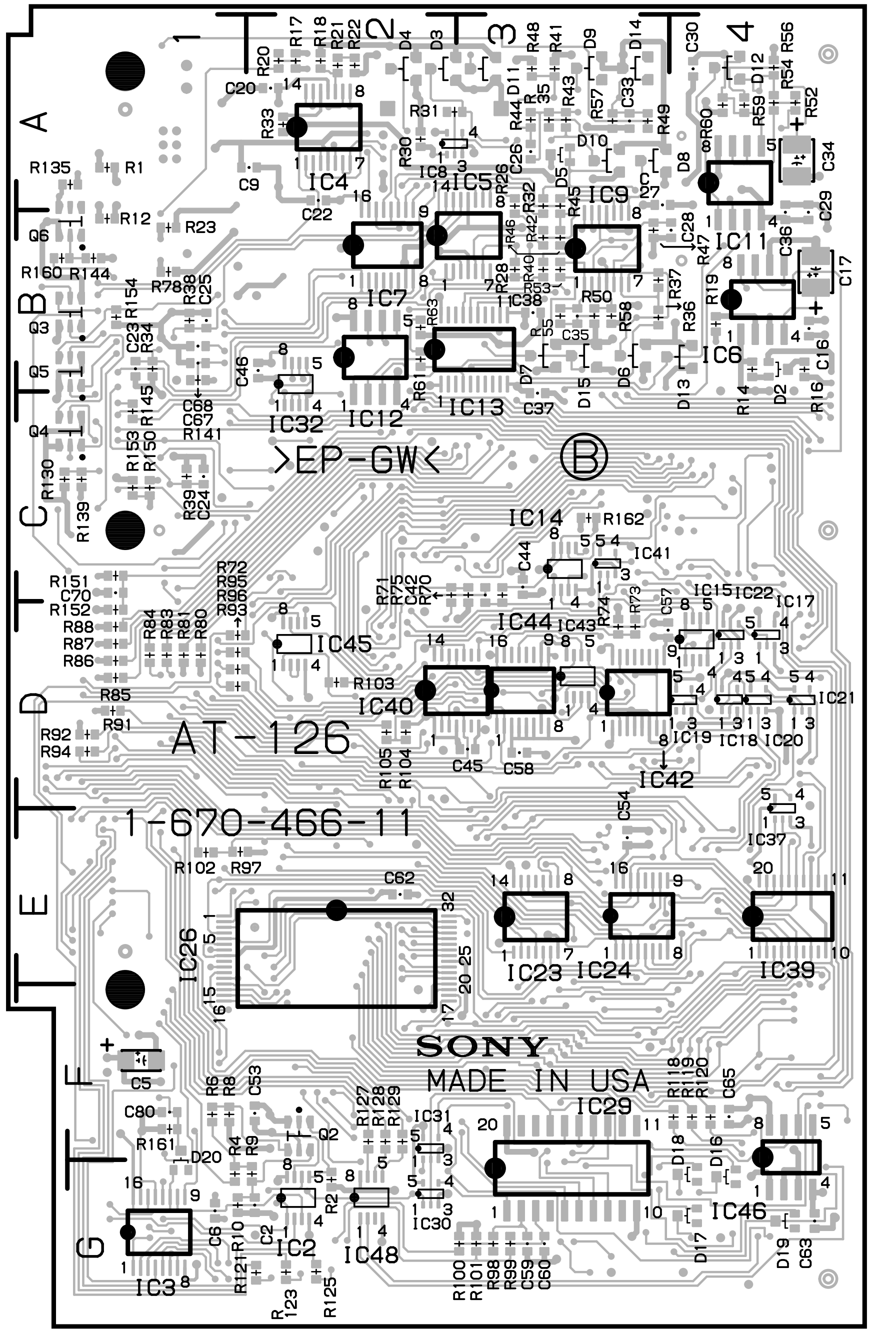
http://getMANUAL.com


A
B
C
D
E
F
G
1
2
3
4
BT1
C15
C19
IC16
IC25
IC27
IC28
IC34
IC35
IC36
IC38
IC47
IC1
CN1
RV1
AUDIO
LOT No.
S No.
A No.
TP1
TP2
TP3
TP4
TP5
S1
AT-126
1-670-466-11
SONY
MADE IN USA
>EP-GW<

BVP-570 (SY)

AT-126 -A SIDE-

SUFFIX : -11


A
B
C
D
E
F
G
1
2
3
4
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC11
IC12
IC13
IC14
IC15
IC17
IC18
IC19
IC20
IC21
IC22
IC23
IC24
IC26
IC29
IC30
IC31
IC32
IC37
IC39
IC40
IC41
IC42
IC43
IC44
IC45
IC46
IC48
>EP-GW<
AT-126
1-670-466-11
SONY
MADE IN USA

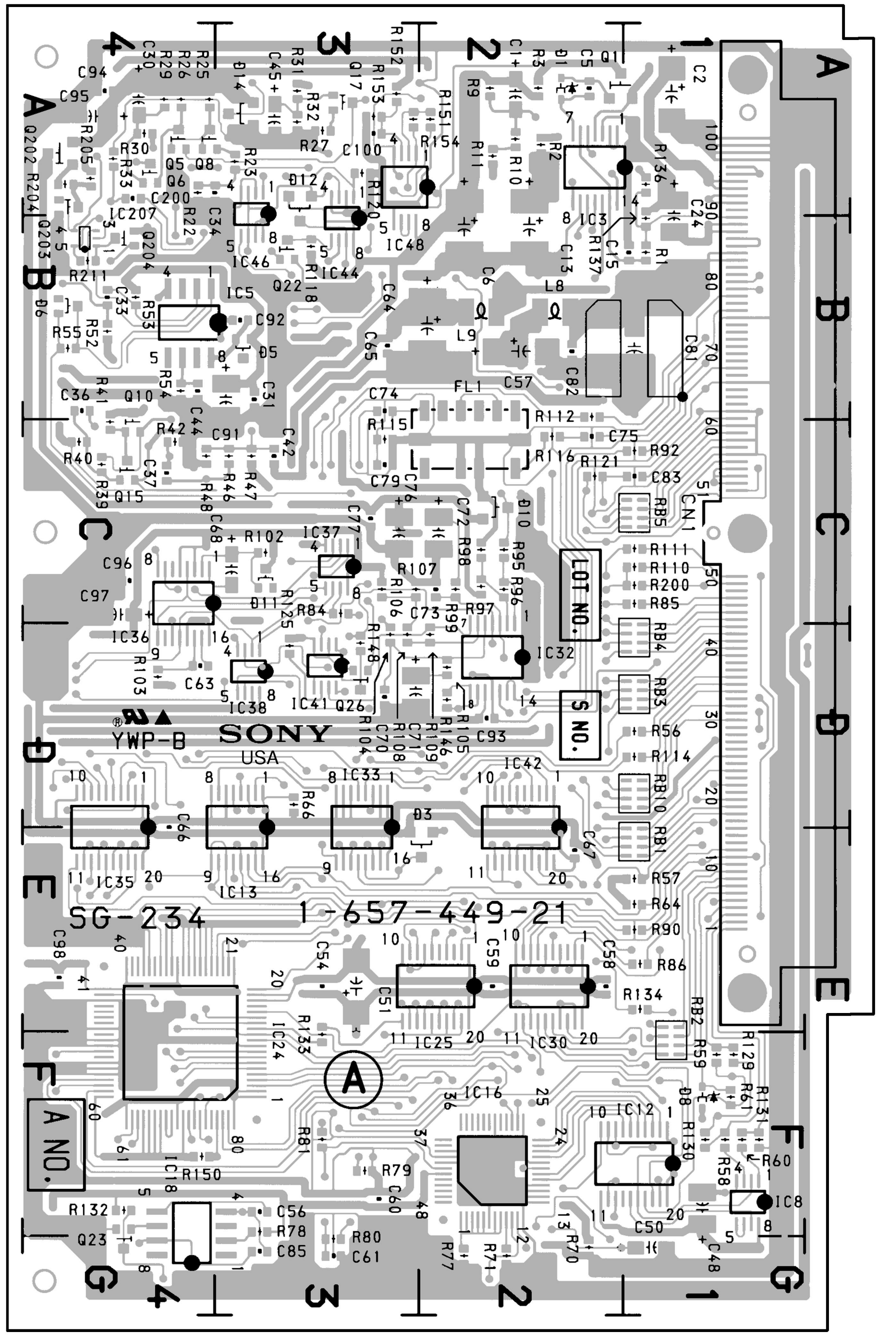
AT-126 -B SIDE-

SUFFIX : -11

AT-126(1-670-466-11)

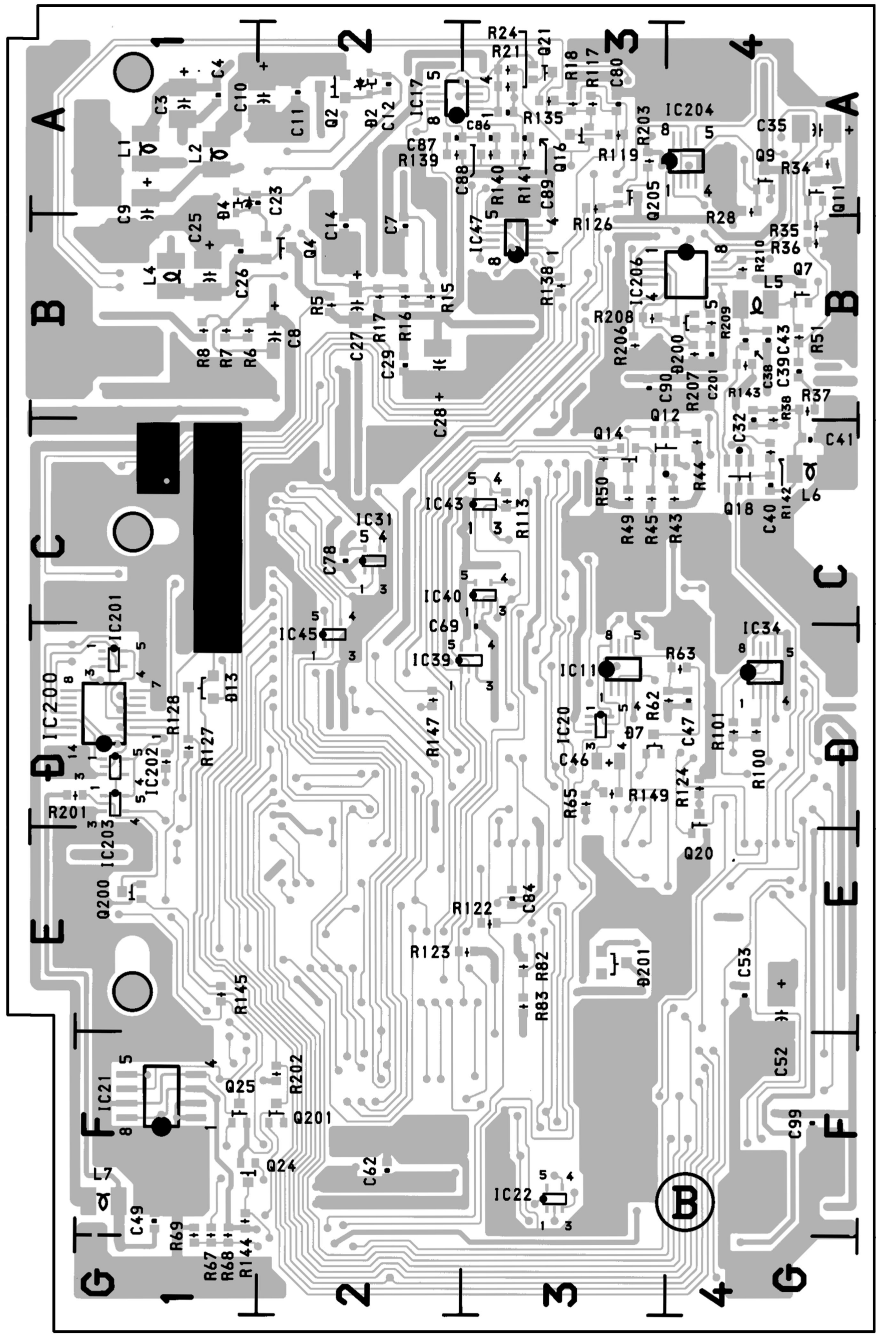
BT1	B4
C1	F1
C2	*G2
C3	G1
C4	F1
C5	*F1
C6	*G1
C7	G1
C8	A1
C9	*A2
C10	A2
C11	A2
C12	B2
C13	B2
C14	A2
C15	A2
C16	*B4
C17	*B4
C18	A2
C19	A2
C20	*A2
C21	B1
C22	*A2
C23	*B1
C24	*C1
C25	*B1
C26	*A3
C27	*A3
C28	*B4
C29	*B4
C30	*A4
C31	B3
C32	B3
C33	*A3
C34	*A4
C35	*B3
C36	*B4
C37	*C3
C38	*B3
C39	B2
C40	B2
C41	B2
C42	*C3
C43	C4
C44	*C3
C45	*D3
C46	*B2
C47	C4
C48	C2
C49	C2
C50	B2
C51	C2
C52	C3
C53	*F2
C54	*E3
C55	E3
C56	C4
C57	*D3
C58	*D3
C59	*G3
C60	*G3
C61	E4
C62	*E2
C63	*G4
C64	D3
C65	*F4
C66	B1
C67	*B1
C68	*B1
C69	C1
C70	*C1
C71	B4
C80	*F1
C81	B3
C82	B2
CN1	C1
D1	A2
D2	*B4
D3	*A2
D4	*A2
D5	*A3
D6	*B3
D7	*B3
D8	*A3
D9	*A3
D10	*A3
D11	*A3
D12	*A4
D13	*B4
D14	*A3
D15	*B3
D16	*G4
D17	*G4
D18	*G4
D19	*G4
D20	*G1
IC1	F1
IC2	*G2
IC3	*G1
IC4	*A2
IC5	*B2
IC6	*B4
IC7	*B2
IC8	*A2
IC9	*B3
IC11	*B4
IC12	*C2
IC13	*B2
IC14	*C3
IC15	*D4
IC16	D2
IC17	*D4
IC18	*D4
IC19	*D4
IC20	*D4
IC21	*D4
IC22	*D4
IC23	*E3
IC24	*E3
IC25	D4
IC26	*E1
IC27	E4
IC28	F4
IC29	*G3
IC30	*G2
IC31	*F2
IC32	*B2
IC33	B2
IC34	C2
IC35	C4
IC36	F2
IC37	*E4
IC38	C3
IC39	*E4
IC40	*D2
IC41	*C3
IC42	*D3
IC43	*D3
IC44	*D3
IC45	*D2
IC46	*G4
IC47	E2
IC48	*G2
L1	B1
L2	F1
Q1	A2
Q2	*F2
Q3	*B1
Q4	*C1
Q5	*B1
Q6	*B1
R1	*A1
R2	*G2
R3	F1
R4	*G1
R5	F1
R6	*F1
R7	F1
R8	*F1
R9	*G2
R10	*G1
R11	G1
R12	*B1
R13	A2
R14	*B4
R15	A2
R16	*B4
R17	*A2
R18	*A2
R19	*B4
R20	*A2
R21	*A2
R22	*A2
R23	*B1
R25	B1
R26	*A3
R28	*B3
R29	A2
R30	*A2
R31	*A2
R32	*A3
R33	*A2
R34	*B1
R35	*A3
R36	*B3
R37	*B3
R38	*B1
R39	*C1
R40	*B3
R41	*A3
R42	*B3
R43	*A3
R44	*A3
R45	*A3
R46	*B3
R47	*B3
R48	*A3
R49	*A3
R50	*B3
R51	B3
R52	*A4
R53	*B3
R54	*A4
R55	*B3
R56	*A4
R57	*A3
R58	*B3
R59	*A4
R60	*A4
R61	*B2
R62	B2
R63	*B2
R64	B2
R65	B2
R66	B2
R70	*C3
R71	*C2
R72	*D1
R73	*D3
R74	*D3
R75	*C3
R76	F1
R77	F1
R78	*B1
R79	C3
R80	*D1
R81	*D1
R82	C3
R83	*D1
R84	*D1
R85	*D1
R86	*D1
R87	*D1
R88	*D1
R89	C3
R90	C3
R91	*D1
R92	*D1
R93	*D1
R94	*D1
R95	*D1
R96	*D1
R97	*E1
R98	*G3
R99	*G3
R100	*G3
R101	*G3
R102	*E1
R103	*D2
R104	*D2
R105	*D2
R106	G4
R107	G4
R108	G3
R109	G3
R110	E2
R111	E2
R112	E2
R113	E2
R114	E2
R115	E2
R116	E2
R117	E2
R118	*F4
R119	*F4
R120	*F4
R121	*G2
R122	G3
R123	*G2
R124	G4
R125	*G2
R126	G4
R127	*F2
R128	*F2
R129	*F2
R130	*C1
R131	C1
R132	B1
R133	B1
R134	B1
R135	*A1
R136	C1
R137	B1
R138	C1
R139	*C1
R140	C1
R141	*B1
R142	B1
R143	C1
R144	*B1
R145	*C1
R146	E3
R147	E3
R148	E3
R149	E3
R150	*C1
R151	*C1
R152	*D1
R153	*C1
R154	*B1
R155	B1
R160	*B1
R161	*F1
R162	*C3
R163	C3
R164	B2
R165	B2
RV1	C3
S1	E3
TP1	F1
TP2	F4
TP3	G3
TP4	C1
TP5	E3

*: B SIDE



BVP-570 (SY)

SG-234 -A SIDE-
SUFFIX : -21



SG-234 -B SIDE-
SUFFIX : -21

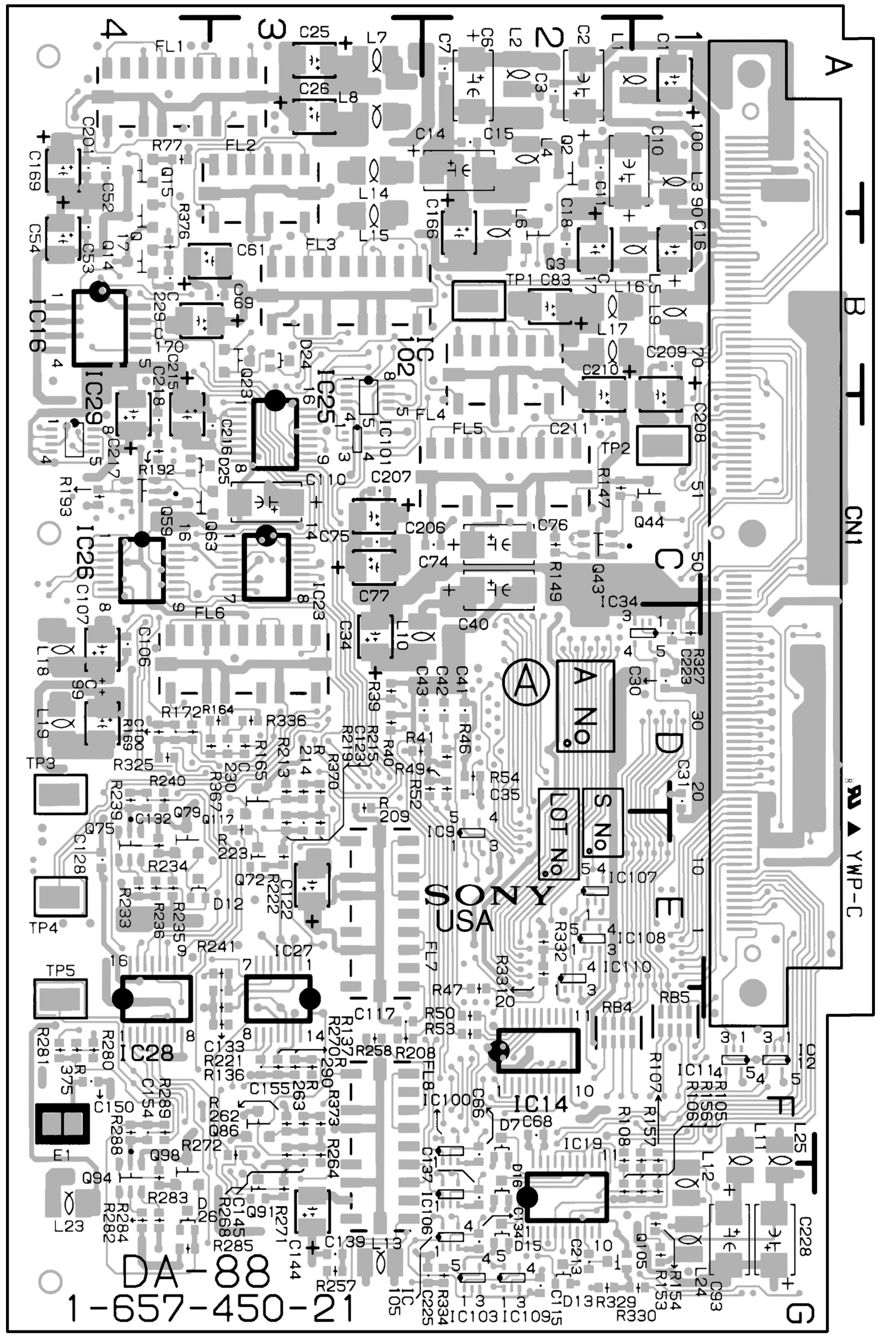
SG-234(1-657-449-21)

CN1	C1
C1	A2
C2	A1
C3	*A1
C4	*A1
C5	A2
C6	B2
C7	*B2
C8	*B2
C9	*A1
C10	*A2
C11	*A2
C12	*A2
C13	B2
C14	*B2
C15	B1
C23	*A1
C24	A1
C25	*B1
C26	*B1
C27	*B2
C28	*B2
C29	*B2
C30	A4
C31	B3
C32	*B4
C33	B4
C34	A3
C35	*A4
C36	B4
C37	C4
C38	*B4
C39	*B4
C40	*C4
C41	*C4
C42	C3
C43	*B4
C45	A3
C46	*D3
C47	*D4
C48	F1
C49	*F1
C50	G1
C51	E3
C52	*E4
C53	*E4
C54	E3
C56	F3
C57	B2
C58	E2
C59	E2
C60	F3
C62	*F2
C63	D4
C64	B2
C65	B3
C66	D4
C67	E2
C68	C3
C69	*D3
C70	D3
C71	D3
C72	C2
C73	C2
C74	B3
C75	C2
C76	C3
C77	C3
C78	*C2
C79	C3
C80	*A3
C81	B1
C82	B2
C83	C1
C85	G3
C87	*A2
C88	*A3
C89	*A3
C90	*B3
C92	B3
C93	D2
C94	A4
C95	A4
C96	C4
C97	C4
C98	E4
C99	*F4
C100	A3
C200	A4
C201	*B4
D1	A2
D2	*A2
D3	E2
D4	*A1
D5	B3
D6	B4
D7	*D3
D8	F1
D10	C2
D11	C3
D12	A3
D13	*D1
D14	A3
D200	*B4
D201	*E3
FL1	C2
IC3	A2
IC5	B4
IC8	F1
IC11	*D3
IC12	F1
IC13	D3
IC16	F2
IC17	*A2
IC18	F4
IC20	*D3
IC21	*F1
IC22	*F3
IC24	F4
IC25	E2
IC30	E2
IC31	*C2
IC32	D2
IC33	D3
IC34	*D4
IC35	D4
IC36	C4
IC37	C3
IC38	D3
IC39	*D3
IC40	*C3
IC41	D3
IC42	D2
IC43	*C3
IC44	B3
IC45	*D2
IC46	A3
IC47	*B3
IC48	A3
IC200	*D1
IC201	*D1
IC202	*D1
IC203	*D1
IC204	*A4
IC206	*B4
IC207	B4
L1	*A1
L2	*A1
L4	*B1
L5	*B4
L6	*C4
L7	*F1
L8	B2
L9	B2
Q1	A2
Q2	*A2
Q4	*B2
Q5	A4
Q6	A4
Q7	*B4
Q8	A4
Q9	*A4
Q10	C4
Q11	*A4
Q12	*C3
Q14	*C3
Q15	C4
Q16	*A3
Q17	A3
Q18	*C4
Q20	*D4
Q21	*A3
Q22	B3
Q23	G4
Q24	*F1
Q25	*F1
Q26	D3
Q200	*E1
Q201	*F2
Q202	A4
Q203	A4
Q204	B4
Q205	*A3
RB1	E1
RB2	F1
RB3	D1
RB4	D1
RB5	C1
RB10	D1
R1	B1
R2	A2
R3	A2
R5	*B2
R6	*B1
R7	*B1
R8	*B1
R9	A2
R10	A2
R11	A2
R15	*B2
R16	*B2
R17	*B2
R18	*A3
R21	*A3
R22	A4
R23	A3
R24	*A3
R25	A4
R26	A4
R27	A3
R28	*A4
R29	A4
R30	A4
R31	A3
R32	A3
R33	A4
R34	*A4
R35	*B4
R36	*B4
R37	*B4
R38	*B4
R39	C4
R40	C4
R41	C4
R42	C4
R43	*C4
R44	*C4
R45	*C3
R46	C3
R47	C3
R48	C4
R49	*C3
R50	*C3
R51	*B4
R52	B4
R54	B4
R55	B4
R56	D1
R57	E1
R58	F1
R59	F1
R60	F1
R61	F1
R62	*D4
R63	*D4
R64	E1
R65	*D3
R66	D3
R67	*F1
R68	*F1
R69	*F1
R71	G2
R77	G2
R78	F3
R79	F3
R80	G3
R81	F3
R83	*E3
R84	C3
R85	C1
R86	E1
R90	E1
R92	C1
R95	C2
R96	C2
R97	C2
R98	C2
R99	C2
R100	*D4
R101	*D4
R102	C3
R103	D4
R104	D3
R105	D2
R106	C3
R107	C3
R108	D3
R109	D2
R110	C1
R111	C1
R112	B2
R113	*C3
R114	D1
R115	C3
R116	C2
R117	*A3
R118	B3
R119	*A3
R121	C2
R122	*E3
R123	*E3
R124	*D4
R126	*A3
R127	*D1
R128	*D1
R129	F1
R130	F1
R131	F1
R132	F4
R133	F3
R134	E1
R135	*A3
R136	A1
R137	B1
R138	*B3
R139	*A2
R140	*A3
R141	*A3
R144	*F1
R145	*E1
R146	D2
R148	D3
R149	*D3
R150	F4
R151	A2
R152	A3
R153	A3
R154	A3
R200	C1
R201	*D1
R202	*F2
R203	*A3
R204	A4
R205	A4
R206	*B3
R207	*B4
R208	*B3
R209	*B4
R210	*B4
R211	B4

*: B SIDE

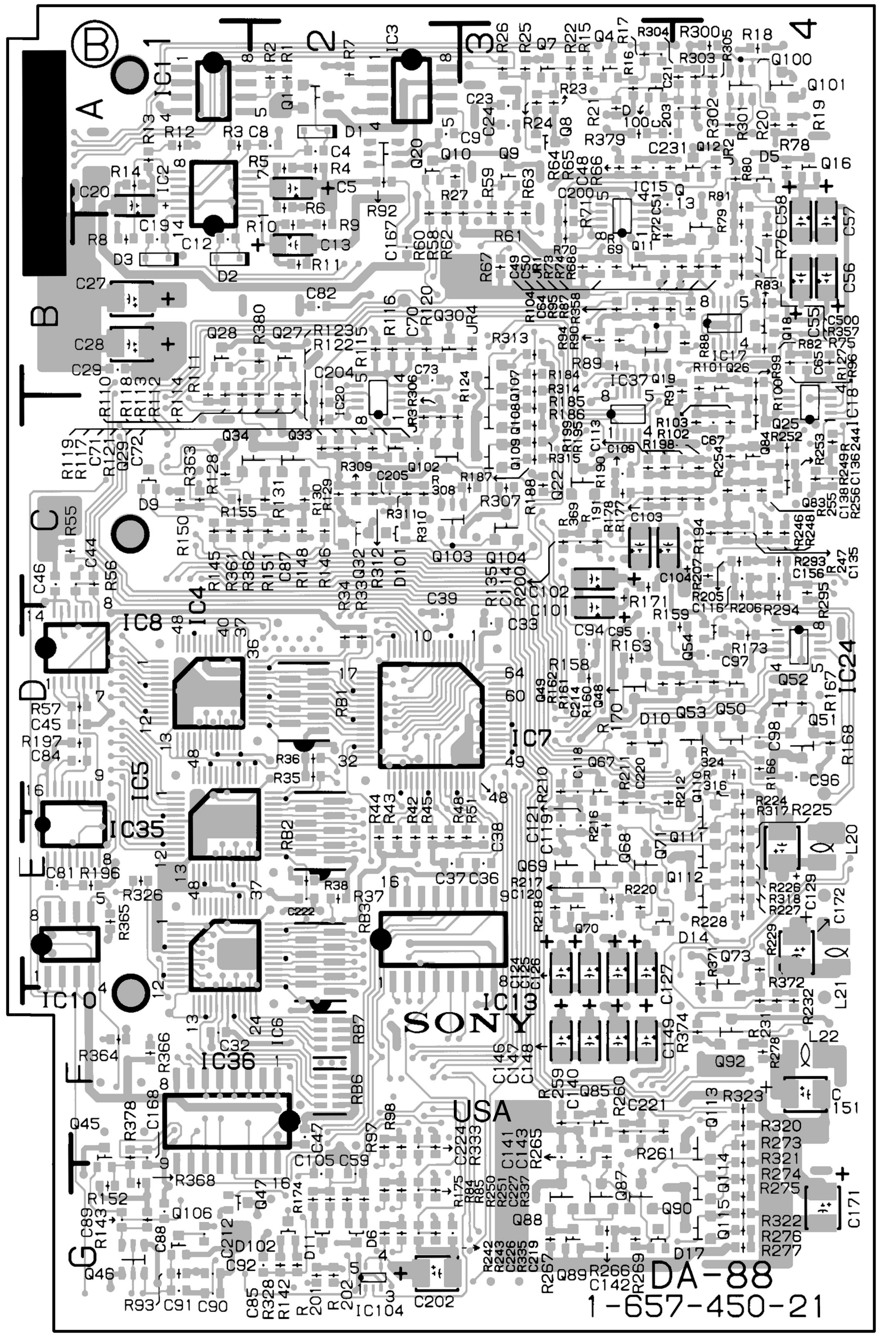
DA-88A(1-657-450-21)

CN1	C1
C1	A1
C2	A2
C3	A2
C4	*A2
C5	*A2
C6	A2
C7	A2
C8	*A2
C9	*A2
C10	A2
C11	A2
C12	*B1
C13	*B2
C14	A2
C15	A2
C16	B1
C17	B2
C18	B2
C19	*B1
C20	*A1
C21	*A3
C23	*A3
C24	*A3
C25	A3
C26	A3
C27	*B1
C28	*B1
C29	*B1
C30	D1
C31	D1
C32	*F1
C33	*D3
C34	D3
C35	D2
C36	*E3
C37	*E2
C38	*E3
C39	*D2
C40	C2
C41	D2
C42	D2
C43	D2
C44	*C1
C45	*D1
C46	*C1
C47	*F2
C48	*A3
C49	*B3
C50	*B3
C51	*A3
C52	A4
C53	B4
C54	B4
C55	*B4
C56	*B4
C57	*B4
C58	*B4
C59	*G2
C61	B3
C64	*B3
C65	*B4
C66	F2
C67	*C4
C68	F2
C69	B3
C70	*B2
C71	*C2
C72	*C2
C73	*B2
C74	C2
C75	C3
C76	C2
C77	C3
C81	*E1
C82	*B2
C83	B2
C84	*D1
C85	*G2
C87	*C2
C88	*G1
C89	*G1
C90	*G1
C92	*G1
C93	G1
C95	*D3
C96	*D4
C97	*D4
C98	*D4
C99	D4
C100	D4
C101	*D3
C102	*C3
C103	*C3
C104	*C3
C105	*G2
C106	D4
C107	D4
C109	*C3
C110	C3
C113	*C4
C114	*C3
C115	G2
C118	*D3
C119	*E3
C120	*E3
C121	*E3
C122	E3
C123	E3
C124	*E3
C125	*E3
C126	*E3
C127	*E3
C128	E4
C129	*E4
C132	D4
C133	F3
C134	G2
C136	*C4
C137	G2
C138	*C4
C140	*F3
C141	*F3
C142	*G3
C143	*F3
C144	G3
C145	F3
C146	*F3
C147	*F3
C148	*F3
C149	*F3
C150	F4
C151	*F4
C154	F4
C155	F3
C166	B2
C167	*B2
C169	A4
C170	B4
C171	*G4
C172	*E4
C200	*A3
C201	A4
C202	*G2
C203	*A4
C204	*B2
C205	*C2
C206	C3
C207	C3
C208	B1
C209	B1
C210	B2
C211	C2
C213	G2
C214	*D4
C215	C4
C216	C3
C217	C4
C218	C4
C219	*G2
C220	*D3
C221	*F3
C222	*E2
C223	D1
C225	G2
C226	*G2
C228	G1
C229	B4
C230	D3
C231	*A3
C500	*B4
D1	*A2
D2	*B1
D3	*B1
D5	*A4
D6	*G2
D7	F2
D9	*C1
D10	*D3
D11	*G2
D12	E4
D13	G2
D14	*E3
D15	G2
D16	G2
D17	*G3
D24	B3
D25	C4
D26	G4
D100	*A3
D101	*C2
D102	*G2
E1	F4
FL1	A4
FL2	A3
FL3	B3
FL4	B2
FL5	C2
FL6	D3
FL7	E3
FL8	F3
IC1	*A1
IC2	*B1
IC3	*A2
IC4	*D1
IC5	*E1
IC6	*E1
IC7	*D2
IC8	*D1
IC9	E2
IC10	*E1
IC11	F1
IC12	F1
IC13	*E2
IC14	F2
IC15	*B3
IC16	B4
IC17	*B4
IC18	*C4
IC19	G2
IC20	*C2
IC23	C3
IC24	*D4
IC25	C3
IC26	C4
IC27	E3
IC28	F4
IC29	C4
IC34	D1
IC35	*E1
IC36	*F2
IC37	*C3
IC100	F2
IC101	C3
IC102	C3
IC103	G2
IC104	*G2
IC105	G2
IC106	G2
IC107	E2
IC108	E2
IC109	G2
IC110	E2
JR1	*B4
JR2	*A4
JR3	*C2
JR4	*B3
L1	A1
L2	A2
L3	A1
L4	A2
L5	B1
L6	B2
L7	A3
L8	A3
L9	B1
L10	D2
L11	F1
L12	G1
L13	G3
L14	A3
L15	B3
L16	B2
L17	B2
L18	D4
L19	D4
L20	*E4
L21	*E4
L22	*F4
L23	G4
L24	G1
L25	F1
Q1	*A2
Q2	A2
Q3	B2
Q4	*A3
Q7	*A3
Q8	*A3
Q9	*A3
Q10	*A2
Q11	*B3
Q12	*A4
Q13	*B4
Q14	B4
Q15	A4
Q16	*A4
Q17	B4
Q18	*B4
Q19	*B3
Q20	*A2
Q22	*C3
Q23	B3
Q25	*C4
Q26	*B4
Q27	*B2
Q28	*B1
Q29	*C2
Q30	*B2
Q32	*C2
Q33	*C2
Q34	*C2
Q43	C2
Q44	C1
Q45	*F1
Q46	*G1
Q47	*G1
Q48	*D4
Q49	*D3
Q50	*D4
Q51	*D4
Q52	*D4
Q53	*D4
Q54	*D4
Q59	C4
Q63	C4
Q67	*D3
Q68	*E3
Q69	*E3
Q70	*E3
Q71	*E3
Q72	E3
Q73	*E4
Q75	E4
Q79	E4
Q83	*C4
Q84	*C4
Q85	*F3
Q86	F3
Q87	*G3
Q88	*G3
Q89	*G3
Q90	*G3
Q91	G3
Q92	*F4
Q94	G4
Q98	G4
Q100	*A4
Q101	*A4
Q102	*C2
Q103	*C2
Q104	*C3
Q105	G2
Q106	*G1
Q107	*B3
Q108	*C3
Q109	*C3
Q110	*E4
Q111	*E4
Q112	*E4
Q113	*F4
Q114	*G4
Q115	*G4
Q117	D3
RB1	*D2
RB2	*E2
RB3	*E2
RB4	F2
RB5	F1
RB6	*F2



BVP-570 (SY)

DA-88A -A SIDE-
SUFFIX : -21



DA-88A -B SIDE-
SUFFIX : -21

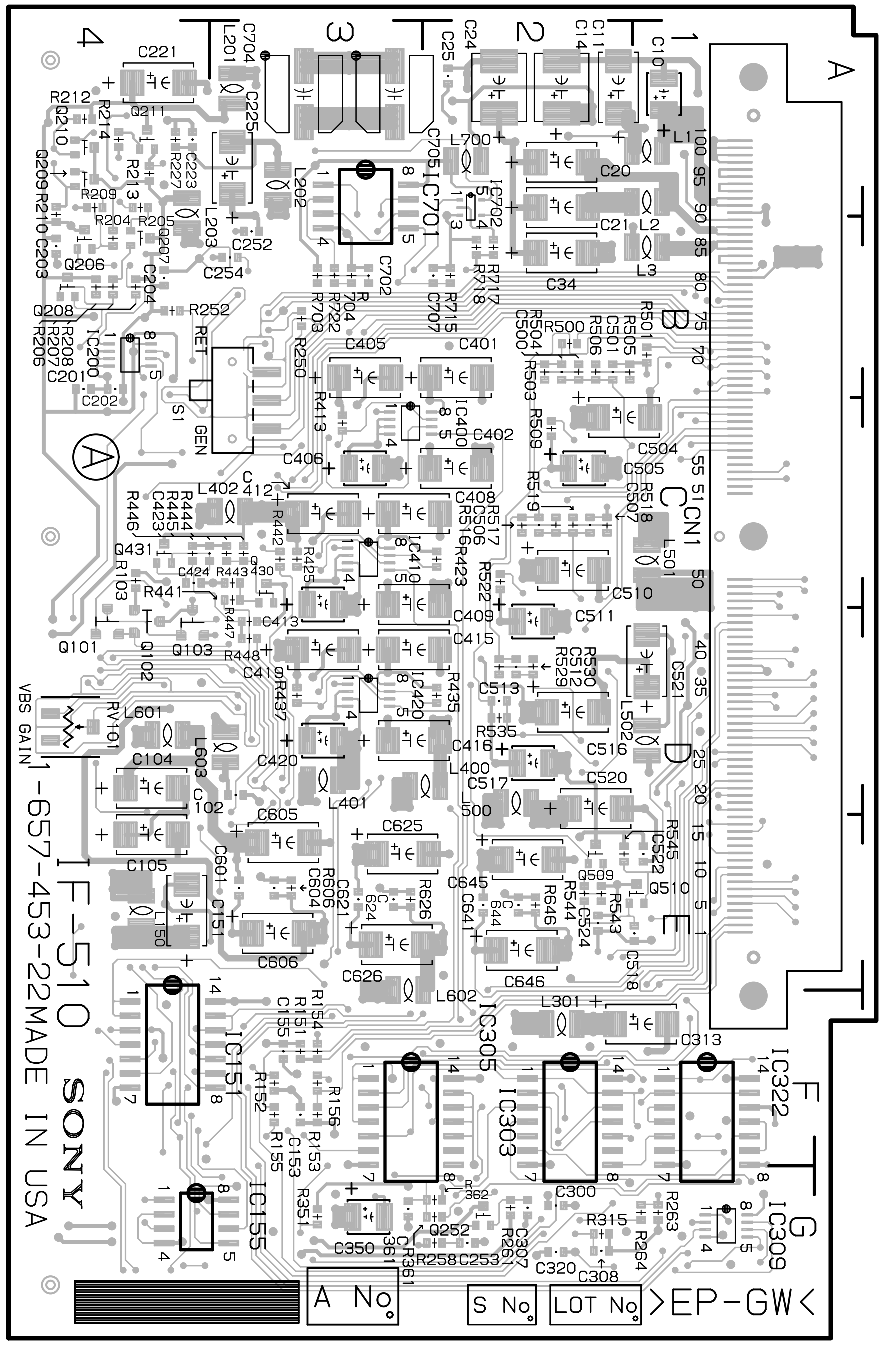
RB7	*F2
R1	*A2
R2	*A2
R3	*A1
R4	*A2
R5	*A2
R6	*A2
R7	*A2
R8	*B1
R9	*B2
R10	*B2
R11	*B2
R12	*A1
R13	*A1
R14	*A1
R15	*A3
R16	*A3
R17	*A3
R18	*A4
R19	*A4
R20	*A4
R21	*A3
R22	*A3
R23	*A3
R24	*A3
R25	*A3
R26	*A3
R27	*A2
R33	*D2
R34	*D2
R35	*D2
R36	*D2
R37	*E2
R38	*E2
R39	D3
R40	D3
R41	D3
R42	*E2
R43	*E2
R44	*E2
R45	*E2
R46	D2
R47	F2
R48	*E2
R49	D2
R50	F2
R51	*E3
R52	D2
R53	F2
R54	D2
R56	*C1
R57	*D1
R58	*A2
R59	*A3
R60	*A2
R61	*A3
R62	*A3
R63	*A3
R64	*A3
R65	*A3
R66	*A3
R67	*B3
R68	*B3
R69	*B3
R70	*B3
R71	*B3
R72	*B3
R73	*B4
R74	*B4
R75	*B4
R76	*B4
R77	A4
R78	*A4
R79	*B4
R80	*A4
R81	*A4
R82	*B4
R83	*B4
R84	*G2
R85	*G2
R87	*B3
R88	*B4
R89	*B3
R90	*B3
R91	*B4
R92	*A2
R93	*G1
R94	*B3
R95	*B3
R96	*B4
R97	*F2
R98	*F2
R99	*B4
R100	*C4
R101	*B4
R102	*C4
R103	*C4
R105	G1
R106	G2
R107	F1
R108	F2
R110	*B1
R111	*B1
R112	*B2
R113	*B2
R114	*B2
R115	*B2
R116	*B2
R117	*C2
R118	*B1
R119	*C2
R120	*B2
R121	*C2
R122	*C2
R123	*C2
R124	*C2
R127	*B4
R128	*C1
R129	*C2
R130	*C2
R131	*C2
R135	*C3
R136	F3
R137	F3
R142	*G2
R145	*C1
R146	*C2
R147	C2
R148	*C2
R149	C2
R150	*C1
R151	*C2
R152	*G1
R153	G1
R154	G1
R155	*C1
R156	G1
R157	F1
R158	*D3
R159	*D4
R160	*D4
R161	*D4
R162	*D3
R163	*D3
R164	D3
R165	D3
R166	*D4
R167	*D4
R168	*D4
R169	D4
R170	*D3
R171	*C3
R172	D4
R173	*D4
R174	*G2
R175	*G2
R177	*C4
R178	*C4
R184	*B3
R185	*C3
R186	*C3
R187	*C3
R188	*C3
R190	*C3
R191	*C3
R192	C4
R193	C4
R194	*C4
R195	*C3
R196	*E1
R197	*D1
R198	*C4
R199	*C3
R200	*C3
R201	*G2
R202	*G2
R205	*C4
R206	*C4
R207	*C4
R208	F3
R209	D3
R210	*D3
R211	*D3
R212	*D3
R213	D3
R214	D3
R215	E3
R216	*E3
R217	*E3
R218	*E3
R219	E3
R220	*E3
R221	F3
R222	E3
R223	E3
R224	*E4
R225	*E4
R226	*E4
R227	*E4
R228	*E4
R229	*E4
R231	*F4
R232	*F4
R233	E4
R234	E4
R235	E4
R236	E4
R239	D4
R240	D4
R241	E3
R242	*G2
R243	*G2
R244	*C4
R246	*C4
R247	*C4
R248	*C4
R249	*C4
R250	*G2
R251	*G2
R252	*C4
R253	*C4
R254	*C4
R255	*C4
R256	*C4
R257	G3
R258	F3
R259	*F3
R260	*F3
R261	*F3
R262	F3
R263	F3
R264	F3
R265	*F3
R266	*G3
R267	*G3
R268	F3
R269	*G3
R270	F3
R271	G3
R272	F3
R273	*F4
R274	*G4
R275	*G4
R276	*G4
R277	*G4
R278	*F4
R280	F4
R281	F4
R282	G4
R283	G4
R284	G4
R285	G4
R288	F4
R289	F4
R290	F3
R293	*C4
R294	*C4
R295	*C4
R300	*A4
R301	*A4
R302	*A4
R303	*A4
R304	*A4
R305	*A4
R306	*C2
R307	*C3
R308	*C3
R309	*C2
R310	*C2
R311	*C2
R312	*C2
R313	*B3
R314	*B3
R315	*C3
R316	*D4
R317	*E4
R318	*E4
R320	*F4
R321	*F4
R322	*G4
R323	*F4
R324	*D4
R325	D4
R326	*E1
R327	D1
R328	*G2
R330	G1
R331	E2
R332	E2
R333	*F2
R334	G2
R335	*G2
R336	D3
R337	*G2
R357	*B4
R358	*B4
R361	*C1
R362	*C1
R363	*C1
R364	*F1
R365	*E1
R366	*F1
R367	D3
R368	*G1
R369	*C3
R370	D3
R371	*E4
R372	*F4
R373	F3
R374	*F4
R375	F4
R378	*F1
R379	*A3
R380	*B2
TP1	B2
TP2	C1
TP3	D4
TP4	E4
TP5	F4

*: B SIDE

IF-510(1-657-453-22)

CN1	C1
C10	A1
C11	A2
C12	*A1
C13	*A2
C14	A2
C15	*A2
C16	*A2
C17	*A1
C20	A2
C21	A2
C22	*A2
C23	*A2
C24	A2
C25	A2
C26	*A2
C30	*A1
C31	*A1
C32	*B1
C33	*B2
C34	B2
C35	*B1
C36	*B2
C101	*D4
C102	D3
C103	*C3
C104	D4
C105	E4
C150	*F3
C151	E4
C152	*F4
C153	F3
C154	*G3
C155	F3
C201	B4
C202	B4
C203	B4
C204	B4
C205	*A4
C206	*A4
C221	A4
C222	*A3
C223	A4
C224	*A3
C225	A3
C226	*A3
C250	*C4
C252	B3
C253	G2
C254	B3
C255	*C3
C300	G2
C301	*F2
C303	*F1
C307	G2
C308	G2
C309	*F1
C311	*F2
C312	*F3
C313	F1
C315	*F1
C320	G2
C321	*G1
C322	*G1
C330	*F1
C350	G3
C351	*G3
C352	*F1
C353	*F2
C400	*C2
C401	B2
C402	C2
C403	*B2
C404	*C3
C405	B3
C406	C3
C407	*D2
C408	C3
C409	C3
C410	*C3
C411	*C3
C412	C3
C413	C3
C414	*D2
C415	D3
C416	D3
C417	*D3
C418	*D3
C419	D3
C420	D3
C421	*C3
C422	*C3
C502	*B2
C503	*C2
C504	C2
C505	C2
C508	*C2
C509	*C2
C510	C2
C511	D2
C513	D2
C514	*D2
C515	*D2
C516	D2
C517	D2
C518	E1
C519	*E1
C520	D2
C521	D1
C522	E1
C524	E2
C525	*D1
C601	E3
C602	*E3
C603	*E3
C604	E3
C605	E3
C606	E3
C621	E3
C622	*E2
C623	*E3
C624	E3
C625	E3
C626	E3
C641	E2
C642	*E2
C643	*E2
C644	E2
C645	E2
C646	E2
C701	*B3
C702	B3
C703	*B3
C704	A3
C705	A3
C706	*A3
C707	B2
D11	*A2
D21	*A2
D31	*B2
D101	*D3
D250	*B3
D400	*C2
D401	*C3
D402	*D3
D500	*E2
IC12	*A2
IC101	*D4
IC151	F4
IC152	*F3
IC153	*F3
IC154	*F3
IC155	G4
IC200	B4
IC201	*B4
IC202	*A4
IC206	*A3
IC301	*G2
IC302	*F2
IC303	F2
IC304	*G2
IC305	F3
IC306	*F1
IC307	*G2
IC308	*G1
IC309	G1
IC310	*G1
IC322	F1
IC351	*F2
IC352	*F2
IC400	C3
IC404	*C4
IC410	C3
IC420	D3
IC500	*E1
IC501	*C1
IC502	*D1
IC601	*E3
IC621	*E2
IC641	*E2
IC701	A3
IC702	A2
L1	A1
L2	A1
L3	B1
L150	E4
L201	A3
L202	A3
L203	A4
L301	F2
L400	D2
L401	D3
L402	C3
L500	D2
L501	C1
L502	D1
L601	D4
L602	E3
L603	D3
L700	A2
Q1	*E4
Q2	*E4
Q10	*A2
Q20	*A2
Q30	*B2
Q101	D4
Q102	D4
Q103	D4
Q109	*E4
Q110	*D3
Q205	*B4
Q206	B4
Q207	B4
Q208	B4
Q209	A4
Q210	A4
Q211	A4
Q250	*B4
Q251	*B3
Q252	G2
Q271	*C4
Q272	*C4
Q273	*C3
Q352	*G3
Q353	*F3
Q354	*G3
Q401	*B2
Q402	*B3
Q403	*C2
Q404	*C3
Q405	*C3
Q406	*B3
Q410	*C2
Q411	*C3
Q412	*C3
Q413	*C3
Q414	*C3
Q420	*D2
Q421	*D3
Q422	*D3
Q423	*D3
Q424	*D3
Q430	C3
Q431	C4
Q500	*C2
Q501	*B2
Q502	*B2
Q503	*C2
Q504	*C2
Q505	*C2
Q506	*D2
Q507	*D2
Q508	*D2
Q509	E2
Q510	E1
Q701	*A3
Q702	*A3
Q703	*A3
RV101	D4
R1	*E4
R2	*E4
R8	*A1
R9	*A1
R10	*A1
R13	*A2
R14	*A1
R15	*A1
R23	*A3
R24	*A2
R25	*A2
R33	*A2
R34	*A2
R35	*A2
R100	*D4
R101	*D4
R102	*C3
R103	C4
R104	*C3
R105	*D4
R106	*D3
R107	*D3
R110	*D4
R111	*D4
R151	F3
R152	F3
R153	F3
R154	F3
R155	F3
R156	F3
R198	*E1
R199	*E1
R200	*E1
R201	*E1
R202	*B4
R203	*B4
R204	B4
R205	A4
R206	B4
R207	B4
R208	B4
R209	A4
R210	A4
R211	*A4
R212	A4
R213	A4
R214	A4
R221	*A4
R222	*A4
R224	*A4
R225	*A4
R226	*A3
R227	A4
R228	*A3
R229	*B3
R230	*B3
R250	B3
R251	*B3
R252	B4
R253	*B3
R254	*B3
R256	*B3
R257	*B3
R258	G2
R259	*B3
R261	G2
R263	G1
R264	G1
R271	*E4
R272	*E4
R273	*C4
R274	*E4
R275	*E4
R276	*C4
R277	*E4
R278	*E4
R279	*C4
R310	*F1
R311	*F1
R315	G2
R320	*G1
R321	*G1
R322	*G1
R323	*G1
R324	*F1
R325	*F1
R326	*F1
R327	*F1
R328	*F1
R329	*F1
R351	G3
R352	*G3
R353	*G3
R354	*F2
R361	G2
R400	*B2
R401	*B3
R402	*B2
R403	*B2
R404	*B2
R405	*C3
R406	*C2
R407	*C2
R408	*C2
R409	*C2
R410	*C2
R411	*C3
R412	*C3
R413	C3
R414	*C3
R415	*C3
R416	*C2
R417	*C2
R418	*C3
R419	*C3
R420	*C3
R421	*C2
R422	*C3
R423	C2
R424	*C3
R425	C3
R426	*C3
R427	*C3
R428	*D2
R429	*D2
R430	*D3
R431	*D3
R432	*D3
R433	*D2
R434	*D3
R435	D2
R436	*D3
R437	D3
R438	*D3
R439	*D3
R440	*C4
R441	C3
R442	C3
R443	C3
R444	C3
R445	C3
R446	C4
R447	D3
R448	D3
R500	B2
R501	B1
R502	*B1
R503	B2
R504	B2
R505	B2
R506	B2
R507	*C2
R508	*C2
R509	C2
R510	*C2
R511	*C2
R512	*C2
R513	*B2
R514	*C2
R515	*C2
R516	C2
R517	C2
R518	C2
R519	C2
R520	*D2
R521	*C2
R522	C2
R523	*C2
R524	*D2
R525	*C2
R526	*C2
R527	*D2
R528	*D2
R529	D2
R530	D2
R531	*D2
R532	*D2
R533	*D2
R534	*D2
R535	D2
R536	*D2
R537	*D2
R538	*D2
R539	*D2
R540	*D2
R541	*D2
R542	*D2
R543	E2
R544	E2
R545	E2
R546	*E1
R547	*E1
R548	*D1
R549	*D1
R550	*D1
R551	*D1
R552	*D1
R553	*D1
R554	*D1
R555	*D1
R601	*E3
R602	*E3
R603	*E3
R604	*E3
R605	*E3
R606	E3
R607	*E3
R621	*E3
R622	*E2
R623	*E3
R624	*E3
R625	*E3
R626	E3
R627	*E3
R641	*E2
R642	*E2
R643	*E2
R644	*E2
R645	*E2
R646	E2
R647	*E2
R701	*B3
R702	*B3
R703	B3
R704	B3
R705	*B3
R706	*A3
R707	*A3
R708	*A3
R709	*A3
R710	*A3
R711	*A3
R712	*A3
R713	*B3
R714	*B3
R715	B2
R716	*B2
R717	B2
R718	B2
R719	*A3
R721	*B3
R722	B3
S1	C3

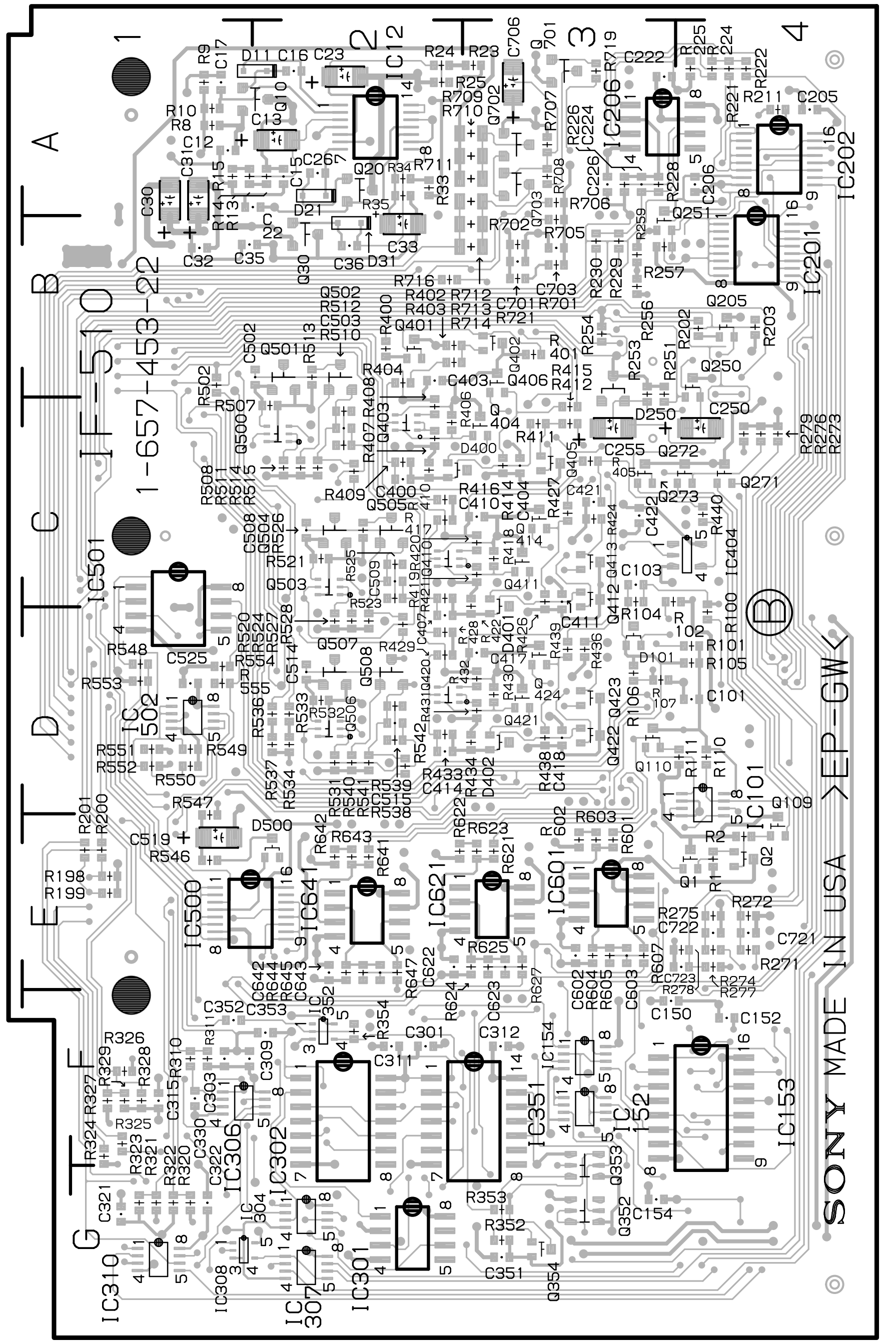
*: B SIDE



BVP-570 (SY)

IF-510 -A SIDE-

SUFFIX : -22



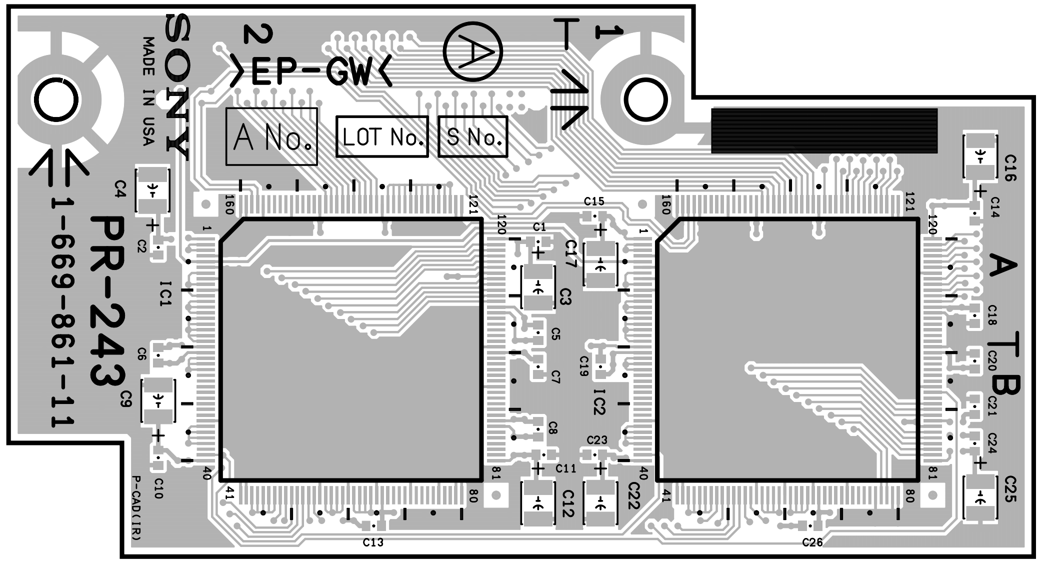
IF-510 -B SIDE-

SUFFIX : -22

PR-243(1-669-861-11)

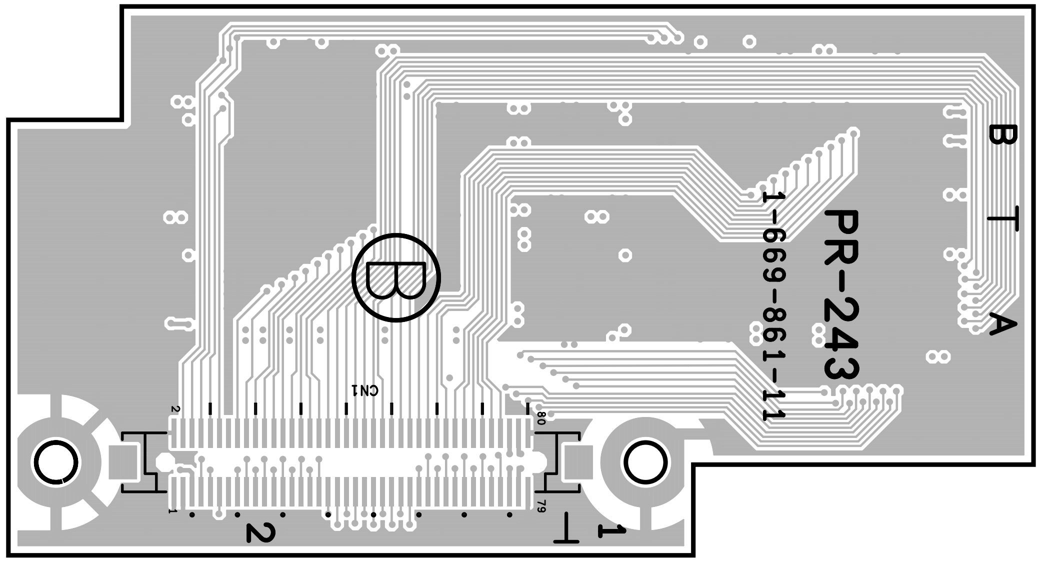
C1	A2
C2	A2
C3	A2
C4	A2
C5	A2
C6	B2
C7	B2
C8	B2
C9	B2
C10	B2
C11	B2
C12	B2
C13	B2
C14	A1
C15	A1
C16	A1
C17	A1
C18	A1
C19	B1
C20	B1
C21	B1
C22	B1
C23	B1
C24	B1
C25	B1
C26	B1
CN1	*A2
IC1	B2
IC2	B1

*: B SIDE



PR-243 -A SIDE-

SUFFIX : -11



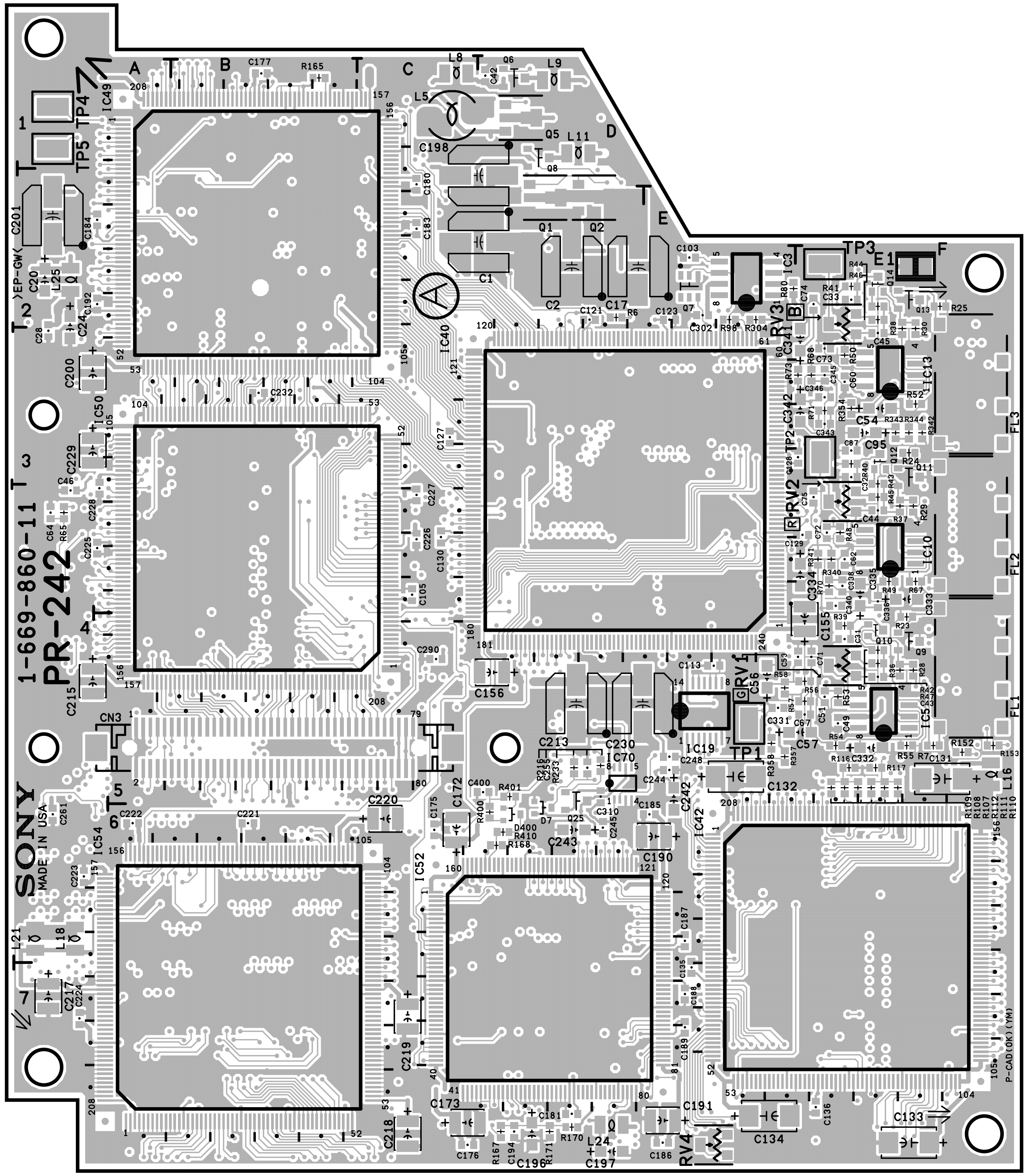
PR-243 -B SIDE-

SUFFIX : -11

PR-242(1-669-860-11)

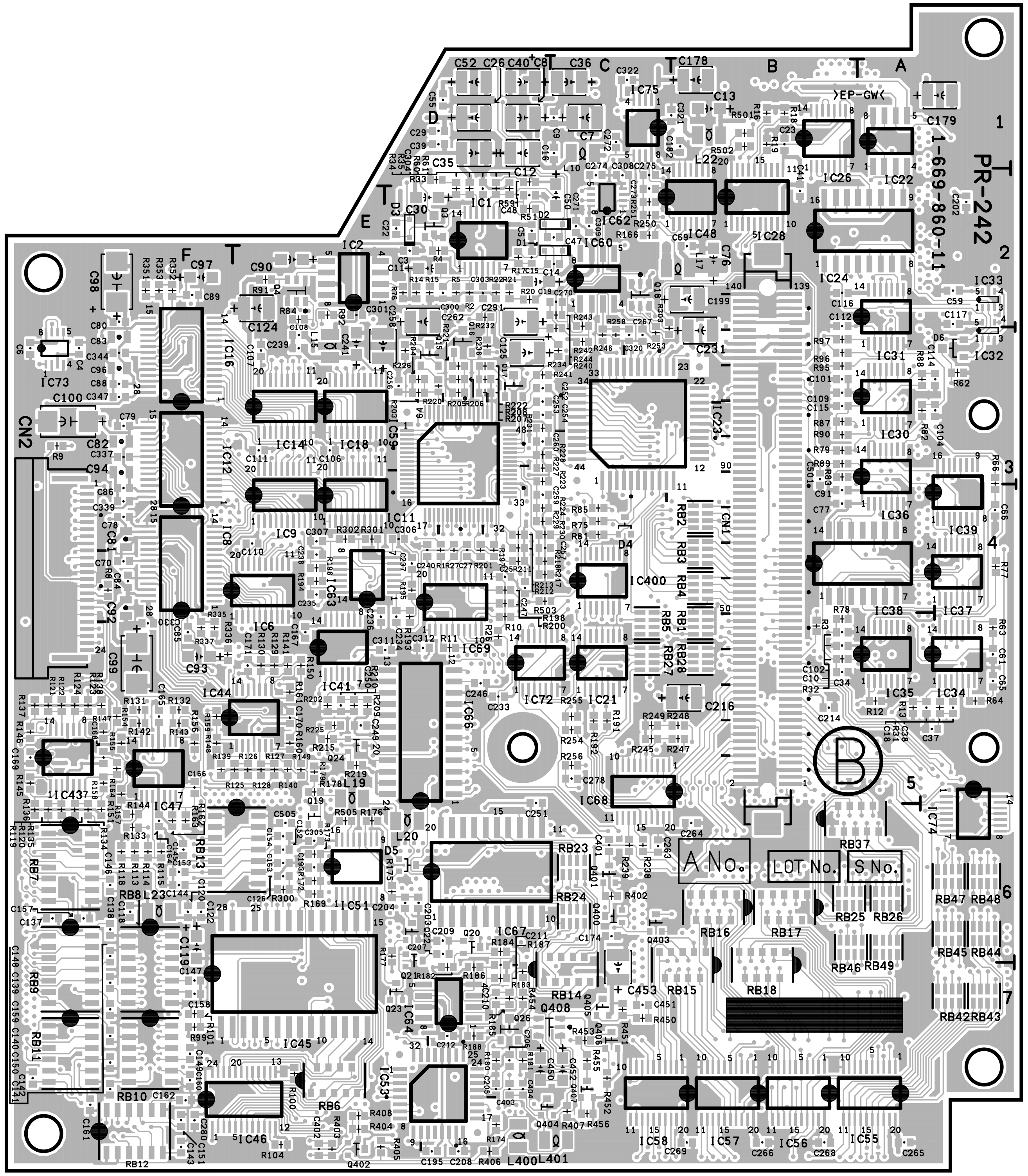
C1	D2	C97	*F2	C189	E7	C301	*E2	IC37	*A4	R1	*D4	R99	*F7	R197	*D4	R501	*B1
C2	D2	C98	*F2	C190	E6	C302	E2	IC38	*A4	R2	*D2	R100	*E7	R198	*D4	R502	*B1
C3	*D2	C99	*F5	C191	E7	C303	*D2	IC39	*A4	R3	*B5	R101	*F7	R200	*D4	R503	*D4
C4	*F3	C100	*F3	C192	A2	C304	*D2	IC40	D4	R4	*D2	R104	*E7	R201	*D4	R505	*E6
C5	*D2	C101	*B3	C193	*E6	C305	*E6	IC41	*E5	R5	*D2	R107	F5	R202	*E5		
C6	*F3	C102	*B5	C194	D7	C306	*D4	IC42	F6	R6	D2	R108	F5	R203	*D3	RB1	*B5
C7	*C1	C103	E2	C195	*D7	C307	*E4	IC43	*F5	R7	F5	R109	F5	R204	*D3	RB2	*B4
C8	*D1	C104	*A3	C196	D7	C308	*C2	IC44	*E5	R8	*F4	R110	F5	R205	*D3	RB3	*B4
C9	*C1	C105	C4	C197	D7	C309	*C2	IC45	*E7	R9	*F3	R111	F5	R206	*D3	RB4	*B4
C10	*B5	C106	*E3	C198	D2	C310	D5	IC46	*E7	R10	*D5	R112	F5	R207	*D3	RB5	*C5
C11	*D2	C107	*E3	C199	*B2	C311	*D5	IC47	*F5	R11	*D5	R113	*F6	R208	*D3	RB6	*E7
C12	*D1	C108	*E3	C200	A3	C312	*D5	IC48	*B2	R12	*A5	R114	*F6	R209	*E5	RB7	*F6
C13	*B1	C109	*B3	C201	A2	C320	*C3	IC49	B2	R13	*A5	R115	*F6	R210	*E5	RB8	*F7
C14	*C2	C110	*E4	C202	*A2	C321	*B1	IC50	B4	R14	*D2	R116	F5	R211	*D4	RB9	*F7
C15	*D2	C111	*E3	C203	*D6	C322	*C1	IC51	*E6	R15	*D2	R117	F5	R212	*D4	RB10	*F7
C16	*C1	C112	*B2	C204	*D6	C330	*F5	IC52	D7	R16	*B1	R118	*F6	R213	*D4	RB11	*F7
C17	D2	C113	E5	C205	*D7	C331	E5	IC53	*D7	R17	*D2	R119	*F6	R215	*E5	RB12	*F7
C18	*A5	C114	*A3	C206	*D7	C332	F5	IC54	B7	R18	*B1	R120	*F6	R216	D5	RB13	*E6
C19	*D2	C115	*B3	C207	*D6	C333	F4	IC55	*A7	R19	*B1	R121	*F5	R217	*D4	RB14	*C7
C20	A2	C116	*B2	C208	*D7	C334	F4	IC56	*B7	R20	*D2	R122	*F5	R218	*D4	RB15	*B7
C22	*D2	C117	*A2	C209	*D6	C335	F4	IC57	*B7	R21	*D2	R123	*F5	R219	*E5	RB16	*B6
C23	*B1	C118	*F6	C210	*D7	C336	F4	IC58	*C7	R22	*D2	R124	*F5	R220	*D3	RB17	*B6
C24	A3	C119	*F6	C211	*D7	C337	*F3	IC59	*D3	R23	F5	R125	*E5	R221	*D3	RB18	*B7
C25	*D4	C120	*F6	C212	*D7	C338	F4	IC60	*C2	R24	F3	R126	*E5	R222	*D3	RB23	*C6
C26	*D1	C121	D2	C213	D5	C339	*F4	IC62	*C2	R25	F2	R127	*E5	R223	*D3	RB24	*C6
C27	*D4	C122	*F6	C214	*B5	C340	F4	IC63	*E4	R26	*D5	R128	*E5	R224	*D4	RB25	*B6
C28	A3	C123	E2	C215	A5	C341	F3	IC64	*D7	R27	*D4	R129	*E5	R225	*E5	RB26	*A6
C29	*D1	C124	*E2	C216	*B5	C342	F3	IC66	*D5	R28	F5	R130	*E5	R226	*D3	RB27	*C5
C30	*D2	C125	*D3	C217	A7	C343	F3	IC67	*D6	R29	F4	R131	*F5	R227	*D3	RB28	*B5
C31	F5	C126	*E6	C218	C7	C344	*F3	IC68	*C5	R30	F3	R132	*F5	R228	*D3	RB37	*B6
C32	F3	C127	C3	C219	C7	C345	F3	IC69	*D4	R31	*A5	R133	*F6	R229	*D4	RB42	*A7
C33	F2	C128	F3	C220	C6	C346	F3	IC70	D5	R32	*B5	R134	*F6	R230	*D4	RB43	*A7
C34	*B5	C129	F4	C221	B6	C347	*F3	IC72	*D5	R33	*D2	R135	*F6	R231	*D3	RB44	*A6
C35	*D1	C130	C4	C222	A6	C400	D5	IC73	*F3	R34	*D2	R136	*F6	R232	*D2	RB45	*A6
C36	*C1	C131	F5	C223	A6	C401	*C6	IC74	*A6	R35	*D2	R137	*F5	R233	D5	RB46	*B6
C37	*A5	C132	E5	C224	A7	C402	*E7	IC75	*C1	R36	F5	R138	*F5	R234	*C3	RB47	*A6
C38	*A5	C133	F7	C225	A4	C403	*D7	IC400	*C4	R37	F4	R139	*F5	R236	*D3	RB48	*A6
C39	*D1	C134	E7	C226	C4	C404	*D7			R38	F3	R140	*E5	R238	*C6	RB49	*A6
C40	*D1	C135	E7	C227	C4	C450	*D7	L5	C1	R39	F5	R141	*E5	R239	*C6		
C41	*B2	C136	F7	C228	A4	C451	*C7	L8	C1	R40	F3	R142	*F5	R240	*C3	RV1	F5
C42	D1	C137	*F6	C229	A3	C452	*C7	L9	D1	R41	F2	R143	*F5	R241	*D3	RV2	F4
C43	F5	C138	*F6	C230	D5	C453	*C7	L10	*C1	R42	F5	R144	*F6	R242	*C3	RV3	F2
C44	F4	C139	*F7	C231	*B3	C501	*B3	L11	D1	R43	F3	R145	*F5	R243	*C2		
C45	F3	C140	*F7	C232	B3	C505	*E6	L15	*E3	R44	F2	R146	*F5	R244	*C2	TP1	E5
C46	A4	C141	*F7	C233	*D5			L16	F5	R45	F4	R147	*F5	R245	*C5	TP2	F3
C47	*C2	C142	*F7	C234	*D5	CN1	*B4	L17	*B2	R46	F2	R148	*F5	R246	*C3	TP3	F2
C48	*D2	C143	*F7	C235	*E4	CN2	*F4	L18	A6	R47	F5	R149	*E5	R247	*B5	TP4	A1
C49	F5	C144	*F6	C236	*E5	CN3	B5	L19	*E5	R48	F4	R150	*E5	R248	*B5	TP5	A1
C50	*C2	C145	*F6	C237	*D4			L20	*D6	R49	F4	R151	*F6	R249	*C5		
C51	F5	C146	*F6	C238	*E4	D1	*C2	L21	A6	R50	F3	R152	F5	R250	*C2		
C52	*D1	C147	*F7	C239	*E3	D2	*C2	L22	*B1	R51	*D2	R153	F5	R251	*C2		
C53	F5	C148	*F6	C240	*D4	D3	*D2	L23	*F6	R52	F3	R154	*F5	R253	*C3		
C54	F3	C149	*F7	C241	*E3	D4	*C4	L24	D7	R53	F5	R155	*F5	R254	*C5		
C55	*D1	C150	*F7	C242	E5	D5	*D6	L25	A2	R54	F5	R156	*F5	R255	*C5		
C56	E5	C151	*F7	C243	D6	D6	*A3	L400	*D7	R55	F5	R157	*F5	R256	*C5		
C57	F5	C152	*E6	C244	E5	D7	D6	L401	*C7	R56	F5	R158	*F5	R258	*C3		
C59	*A2	C153	*F6	C245	D6	D400	D6			R57	F5	R159	*F5	R300	*E6		
C60	F3	C154	*E6	C246	*D5			Q1	D2	R58	E5	R160	*E5	R301	*E4		
C61	*A5	C155	F5	C247	*D4	E1	F2	Q2	D2	R59	*D2	R161	*E5	R302	*E4		
C62	F4	C156	D5	C248	E5			Q3	*D2	R60	*D2	R162	*F6	R303	*C3		
C64	A4	C157	*F6	C249	*E5	FL1	F5	Q4	*E2	R61	*D2	R163	*F6	R304	E2		
C65	*A5	C158	*F7	C250	*E5	FL2	F4	Q5	D1	R62	*A3	R164	*F5	R335	*F5		
C66	*A4	C159	*F7	C251	*D5	FL3	F3	Q6	D1	R63	*A5	R165	B1	R336	*F5		
C67	F5	C160	*F7	C252	*D3			Q7	E2	R64	*A5	R166	*C2	R337	*F5		
C69	*B2	C161	*F7	C253	*D3	IC1	*D2	Q8	D1	R65	A4	R167	D7	R340	F4		
C70	*F4	C162	*F7	C254	*D3	IC2	*E2	Q9	F5	R66	*A3	R168	D6	R341	F4		
C71	F5	C163	*E6	C255	D5	IC3	E2	Q10	F5	R67	F4	R169	*E6	R342	F3		
C72	F4	C164	*F6	C256	*D3	IC5	F5	Q11	F3	R68	F3	R170	D7	R343	F3		
C73	F3	C165	*F5	C257	*D4	IC6	*E4	Q12	F3	R70	F4	R171	D7	R344	F3		
C74	F2	C166	*F5	C258	*E3	IC8	*F4	Q13	F2	R71	F3	R172	*E6	R351	*F2		
C75	F4	C167	*E5	C259	*D4	IC9	*E4	Q14	F2	R73	F3	R173	*E6	R352	*F2		
C76	*B2	C168	*F5	C260	*D3	IC10	F4	Q15	*D3	R75	*C4	R174	*D7	R353	*F2		
C77	*B4	C169	*F5	C261	A6	IC11	*E4	Q16	*D3	R76	*D2	R175	*D6	R354	F3		
C78	*F4	C170	*E5	C262	*D2	IC12	*F3	Q17	*D3	R77	*A4	R176	*E6	R357	E5		
C79	*F3	C171	*E5	C263	*C6	IC13	F3	Q18	*C2	R78	*B5	R177	*D6	R358	E5		
C80	*F2	C172	C6	C264	*B6	IC14	*E3	Q19	*E6	R79	*B3	R178	*E5	R400	D6		
C81	*F4	C173	C7	C265	*A7	IC16	*F3	Q20	*D6	R80	E2	R179	*E5	R401	D5		
C82	*F3	C174	*C6	C266	*B7	IC18	*E3	Q21	*D6	R81	*C4	R180	*D7	R402	*C6		
C83	*F3	C175	C6	C267	*C3	IC19	E5	Q22	*D6	R82	*A3	R181	*D7	R403	*E7		
C84	*F4	C176	C7	C268	*B7	IC21	*C5	Q23	*D7	R83	*B3	R182	*D7	R404	*E7		
C85	*F5	C177	B1	C269	*B7	IC22	*A1	Q24	*E5	R84	*E2	R183	*D7	R405	*E7		
C86	*F4	C178	*B1	C270	*C2	IC23	*C3	Q25	D5	R85	*C4	R184	*D6	R406	*D7		
C87	F3	C179	*A1	C271	*C2	IC24	*A2	Q26	*D7	R87	*B3	R185	*D7	R407	*C7		
C88	*F3	C180	C2	C272	*C1	IC26	*B1	Q400	*C6	R88	*A3	R186	*D7	R408	*E7		
C89	*F2	C181	D7	C273	*C2	IC28	*B2	Q401	*C6	R89	*B3	R187	*D7	R410	D6		
C90	*E2	C182	*B1	C274	*C2	IC30	*A3	Q402	*E7	R90	*B3	R188	*D7	R450	*C7		
C91	*B4	C183	C2	C275	*C2	IC31	*A2	Q403	*C6	R91	*E2	R191	*C5	R451	*C7		
C92	*F4	C184	A2	C278	*C5	IC32	*A3	Q404	*D7	R92	*E2	R192	*C5	R452	*C7		
C93	*F5	C185	E6	C280	*F7	IC33	*A2	Q405	*C7	R95	*B3	R193	*D5	R453	*C7		
C94	*F3	C186	E7	C290	C5	IC34	*A5	Q406	*C7	R96	*B3	R194	*E4	R454	*D7		
C95	F3	C187	E6	C291	*D2	IC35	*A5	Q407	*C7	R97	*B3	R195	*D4	R455	*C7		
C96	*F3	C188	E7	C300	*D2	IC36	*A3	Q408	*D7	R98	E2	R196	*E4	R456	*C7		

*: B SIDE


1-669-860-11
PR-242
SONY
MADE IN USA
IC40
IC49
CN3
TP1
TP3
TP4
TP5
RV1
RV2
RV3
RV4
FL1
FL2
FL3

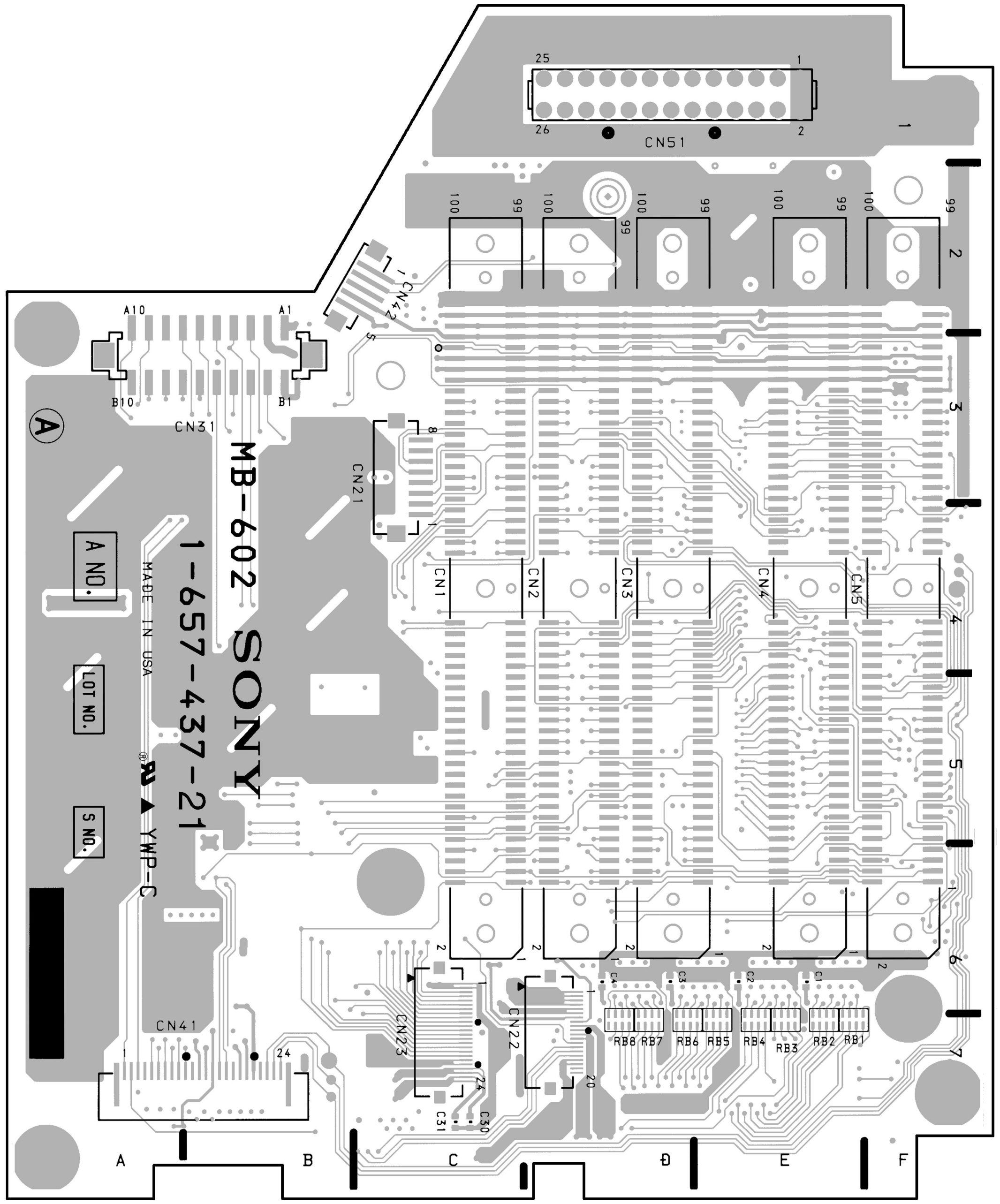
BVP-570 (SY)

PR-242 -A SIDE-
SUFFIX : -11


1-669-860-11
PR-242
CN1
CN2
IC23
IC45
IC46
IC55
IC56
IC57
IC58
A No.
LOT No.
S No.

PR-242 -B SIDE-
SUFFIX : -11

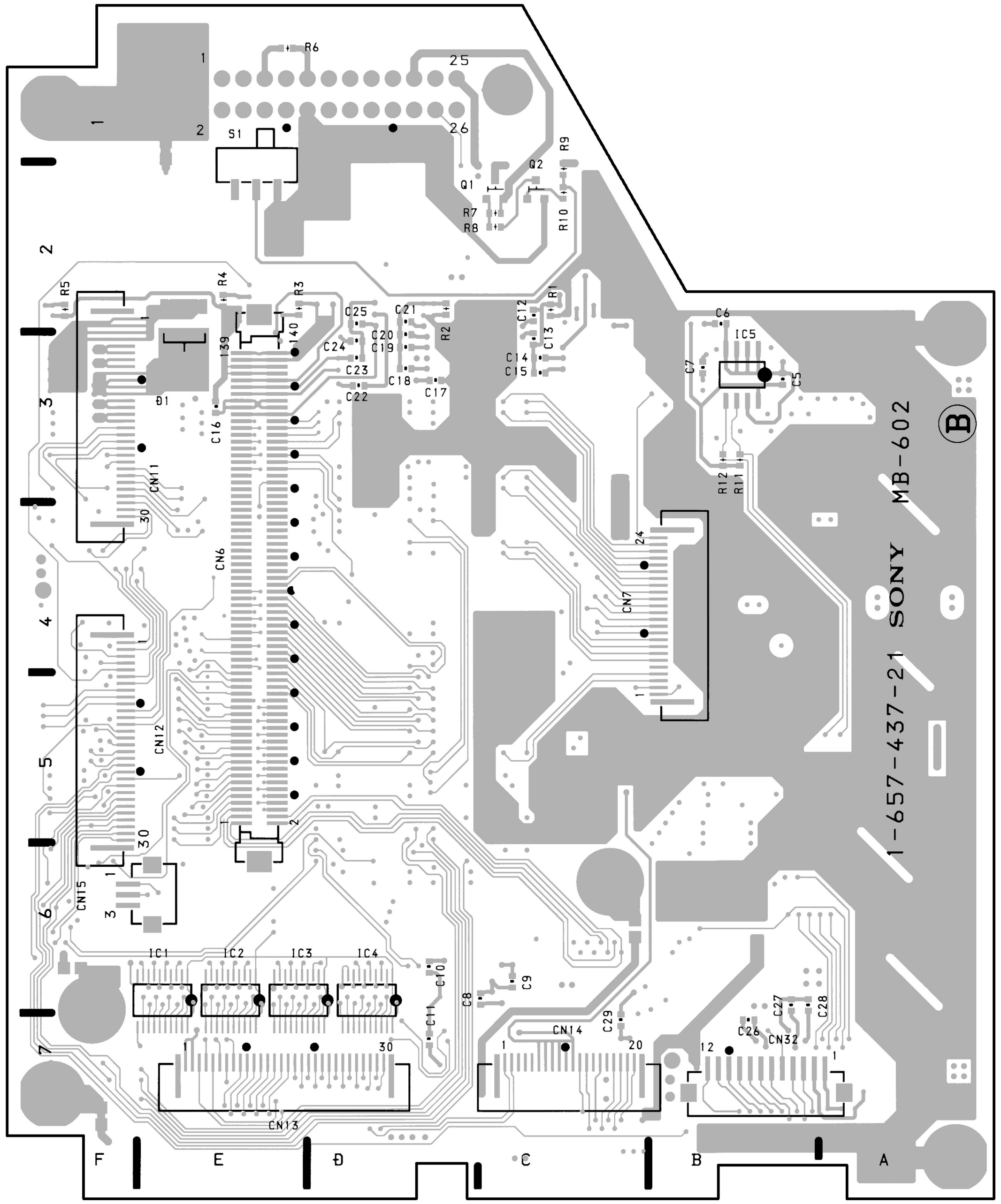
http://getMANUAL.com


CN51
CN42
A10
A1
B10
B1
CN31
CN21
CN1
CN2
CN3
CN4
CN5
CN23
CN22
CN41
RB8 RB7 RB6 RB5 RB4 RB3 RB2 RB1
C31
C30
A NO.
LOT NO.
S NO.
MADE IN USA
MB-602
1-657-437-21
SONY
YWP-C
A
B
C
D
E
F
1
2
3
4
5
6
7

BVP-570 (SY)

MB-602 -A SIDE-

SUFFIX : -21


S1
R6
Q1
Q2
R7
R8
R9
R10
R5
R4
R3
D1
C25
C21
C20
C19
C24
C23
C22
C18
C17
C16
R2
R1
C12
C13
C14
C15
C6
IC5
C7
C5
R12
R11
CN11
CN6
CN7
CN12
CN15
IC1
IC2
IC3
IC4
C10
C8
C9
C11
CN14
C29
C27
C28
C26
CN32
CN13
SONY
MB-602
1-657-437-21
F
E
D
C
B
A
1
2
3
4
5
6
7

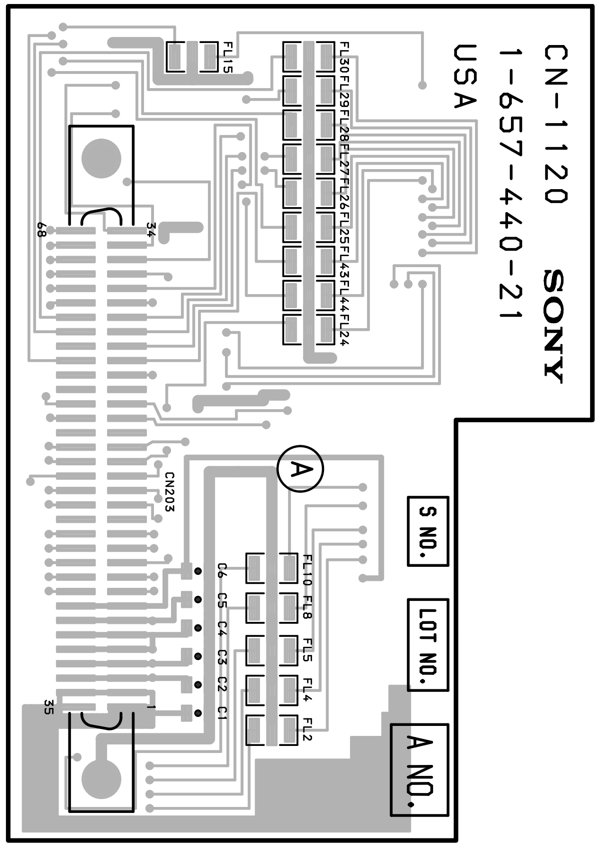
MB-602 -B SIDE-

SUFFIX : -21

MB-602(1-657-437-21)

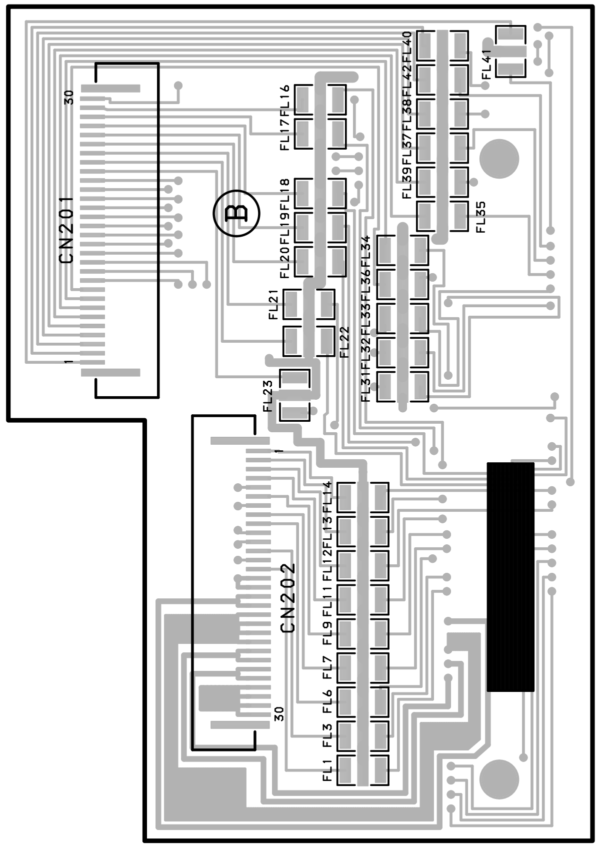
CN1	C4
CN2	D4
CN3	D4
CN4	E4
CN5	E4
CN6	*E4
CN7	*C4
CN11	*E3
CN12	*E5
CN13	*E7
CN14	*C7
CN15	*F6
CN21	C3
CN22	C7
CN23	C7
CN31	B3
CN32	*B7
CN41	B7
CN42	C2
CN51	D1
C1	E6
C2	E6
C3	D6
C4	D6
C5	*B3
C6	*B2
C7	*B3
C8	*D6
C9	*C6
C10	*D6
C11	*D6
C12	*C2
C13	*C3
C14	*C3
C15	*C3
C16	*E3
C17	*D3
C18	*D3
C19	*D3
C20	*D3
C21	*D2
C22	*D3
C23	*D3
C24	*D3
C25	*D2
C26	*B7
C27	*B7
C28	*B7
C29	*C7
C30	C7
C31	C7
D1	*E3
IC1	*E6
IC2	*E6
IC3	*E6
IC4	*D6
IC5	*B3
Q1	*D2
Q2	*C2
RB1	E7
RB2	E7
RB3	E7
RB4	E7
RB5	E7
RB6	D7
RB7	D7
RB8	D7
R1	*C2
R2	*D2
R3	*E2
R4	*E2
R6	*E1
R7	*D2
R8	*D2
R9	*C1
R10	*C2
R11	*B3
R12	*B3
S1	*E1

*: B SIDE

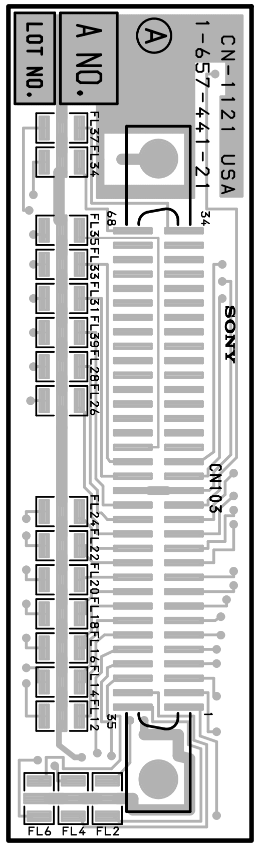

CN-1120
1-657-440-21
USA
SONY
CN203
S NO.
LOT NO.
A NO.
A

BVP-570 (SY)

CN-1120 -A SIDE-
SUFFIX : -21

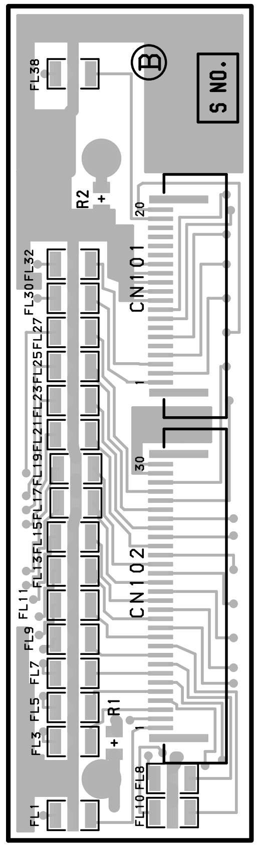

CN201
CN202
B

CN-1120 -B SIDE-
SUFFIX : -21

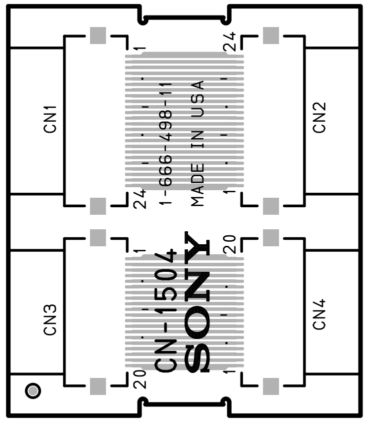

LOT NO.
A NO.
A
CN-1121 USA
1-657-441-21
SONY
CN103

CN-1121 -A SIDE-
SUFFIX : -21

BVP-570 (SY)

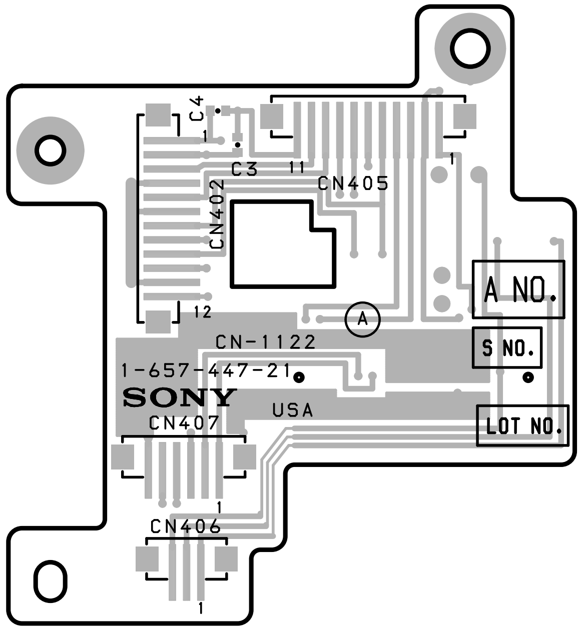

B
S NO.
CN101
CN102

CN-1121 -B SIDE-
SUFFIX : -21


CN1
CN2
CN3
CN4
1-666-498-11
MADE IN USA
CN-1504
SONY

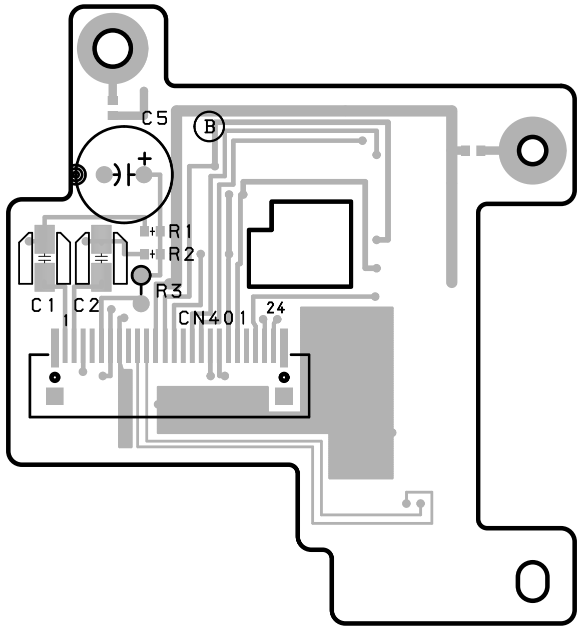
CN-1504 -A SIDE-
SUFFIX : -11

BVP-570 (SY)

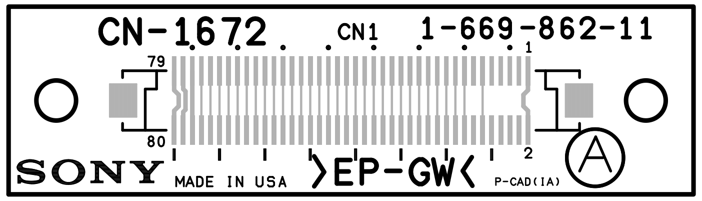

CN402
CN405
CN-1122
1-657-447-21
SONY
USA
CN407
CN406
A NO.
S NO.
LOT NO.
A

BVP-570 (SY)

CN-1122 -A SIDE-
SUFFIX : -21

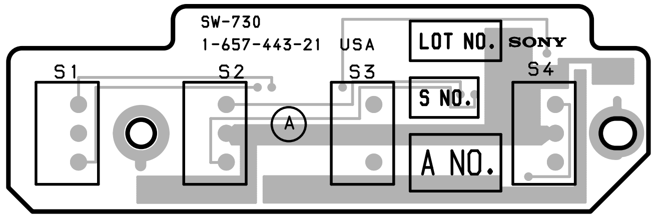

C5
B
R1
R2
R3
C1
C2
CN401

CN-1122 -B SIDE-
SUFFIX : -21


CN-1672
CN1
1-669-862-11
SONY
MADE IN USA
EP-GW
P-CAD(IA)
A

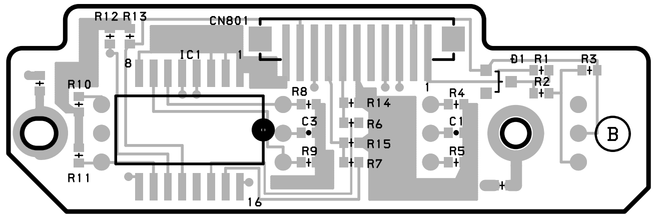
BVP-570 (SY)

CN-1672 -A SIDE-
SUFFIX : -11

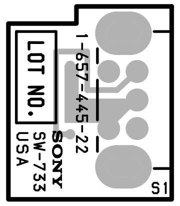

SW-730
1-657-443-21 USA
LOT NO.
SONY
S1
S2
S3
S4
S NO.
A NO.
A

BVP-570 (SY)

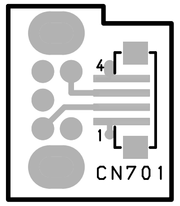
SW-730 -A SIDE-
SUFFIX : -21


R12 R13
CN801
IC1
8
16
R10
R11
R8
C3
R9
R14
R6
R15
R7
R4
C1
R5
D1
R1
R2
R3
B

SW-730 -B SIDE-
SUFFIX : -21

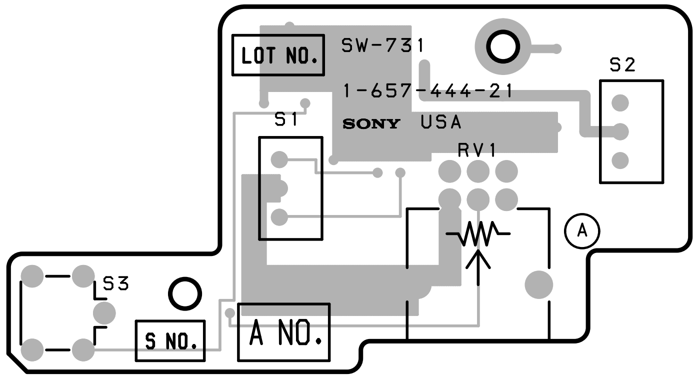

LOT NO.
1-657-445-22
SONY
SW-733
USA
S1

SW-733 -A SIDE-
SUFFIX : -22



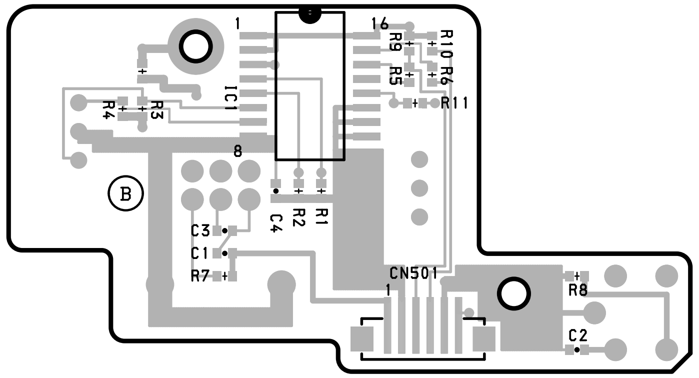
SW-733 -B SIDE-
SUFFIX : -22

BVP-570 (SY)

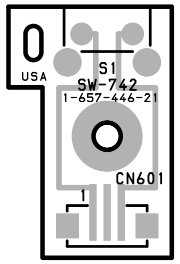

LOT NO.
SW-731
1-657-444-21
SONY USA
S1
S2
RV1
A
S3
S NO.
A NO.

BVP-570 (SY)

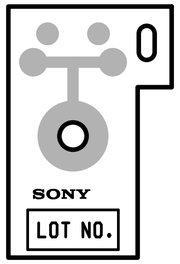
SW-731 -A SIDE-
SUFFIX : -21


1
16
IC1
8
R9
R10
R6
R5
R11
R4
R3
B
C3
C1
R7
C4
R2
R1
CN501
1
R8
C2

SW-731 -B SIDE-
SUFFIX : -21

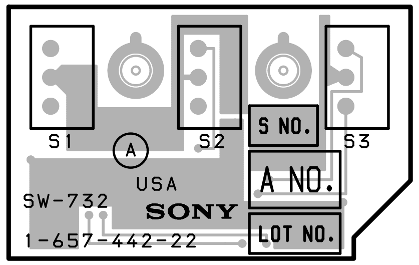

USA
S1
SW-742
1-657-446-21
CN601

SW-742 -A SIDE-
SUFFIX : -21



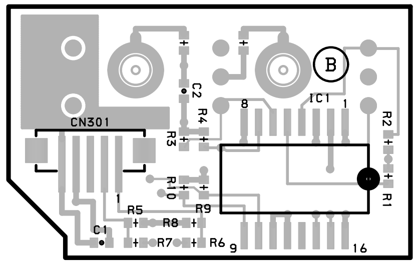
SW-742 -B SIDE-
SUFFIX : -21

BVP-570 (SY)


S1
A
S2
S3
S NO.
A NO.
SW-732
USA
SONY
1-657-442-22
LOT NO.

BVP-570 (SY)

SW-732 -A SIDE-
SUFFIX : -22


B
C2
R4
R3
8
IC1
1
CN301
R10
R2
R1
R5
R9
R8
C1
R7
R6
9
16

SW-732 -B SIDE-
SUFFIX : -22

gM

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